

# small air forces observer

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# small air forces observer

the newsletter of the Small Air Forces Clearing House

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**SAFO EDITORIAL POLICY;** The purpose of the SAFCH is to "promote interest in the history and modeling of the aircraft of the smaller countries". In support of this goal, the SAFCH encourages international cooperation in researching the history of aviation on all aspects of aviation, both military and civil, from all periods of time, and for all the smaller countries. In return for this support, members are asked to submit occasional progress reports for publication in the SAFO. While the final results should appear in the most prestigious publication possible, it is requested that the SAFCH be mentioned (with address) in the article and that SAFO be afforded the opportunity of reprinting the material.

**SUBSCRIPTION RATE:** Subscription to the current volume of the SAFO is US \$7.00 for 4 issues per year via surface mail. For air mail delivery, add \$6.50 for Europe and Latin America or \$8.25 for Asia, African, and Australia. New subscriptions begin with all issues of the volume current at the time payment is received; if you desire otherwise, please specify with your payment which issues are desired. Send remittance to Jim Sanders, 27965 Berwick Dr., Carmel, CA 93923 USA. You can also have your bank transfer money directly to the SAFCH bank account: Routing # 3220-7021-3; Coast Saving and Loan, 137 Carmel Valley, 27845 Berwick Dr., Carmel, CA 93923; Credit to James V. Sanders, Account number 03105350.

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**COVER COMMENTS:** The Venezuelan Air Force took delivery recently of four more EMB-312 Tucano trainers and presently has a total of 12 of these aircraft in its inventory. Deliveries to the Service will proceed at a pace of three aircraft per month from November onward until the original order for 30 units is completed in April next year. Of the 556 units marketed to date, 221 have been delivered and the type is in service with, or has been ordered by, the air forces of Brazil, Egypt, Iraq, United Kingdom, Honduras, and Venezuela. (Embraer photo 2JA71A4: Nov'86)

**EDITORIAL:** Several comments appeared in the most recent issue of WWI AERO that apply equally well for the SAFO. Since I couldn't have said them better myself, I will quote them verbatim: (a) The article on verifying Albatros drawings by comparison with photos should be read by everyone attempting to prepare drawings for publication. "Give, on the drawing, at least some of the sources used. As you can see here, among the poorest drawings in terms of accuracy are the German Albatros manual drawings." (b) "Show, on the drawing, the parts that are either invented for want of better sources, or adapted from some other design. The alternative would be to leave these areas blank." (2) In regard to reviews of other publications the editor writes: "We have tried to report on many of the magazines which have articles of special interest to our membership - a partice which for most of these 25 years we have tried to encourage others to imitate - mostly with no success whatsoever: it is as if the world's aviation magazines and organizations are flying blind, unaware of each other's existence.... We need your help in encouraging other magazines and journals to review each other's (and our) work." I know how you feel LEO, I've been fighting the same battle for 10 years. Our ABSTRACTS are appreciated for IPMS-UK says SAFO's "greatest value must surely lie in its abstracts of articles from publication world-wide".

**EDITORIAL:** While reading the editorial about joys of building "collections" in the latest RANDOM THOUGHTS from IPMS-Canada, it occurred to me that most SAFCH members who are also modelers must build collections. After all, one of our readers is not likely to be building a 1/32-scale model of the Hafeli DH-2 with complete interior structure; if he wanted that much detail he would probably be building a Mustang or a Spitfire. He is much more likely to be building a "collection" of all Hafeli aircraft. Then I thought how much fun it would be to publish a list of the biggest collections put together by our members - we could call it the SAFCH BOOK OF COLLECTIONS until a better name comes along. The grandfather of all small-air-force collections is, of course, the one with the most countries represented. But, others easily come to mind: the most aircraft in Polish markings, the most PZL aircraft in the markings of different countries, the most PZL P-11c in the markings of different Polish Air Force squadrons, etc. You can set up your own category. Send me the name of your collections with a list of aircraft, I'll publish the ones with the "most", and we'll see who can beat them.

#### ARGENTINA

LATIN AMERICAN WINGS (Monsenor Alberti 1575, 1643 Beccar, Republican Argentina; 4 issues US \$7.00 to Latin America, \$10.00 surface to all other countries)

Last issue received: 1/2 86

#### AUSTRALIA

AUSTRALIAN PLASTIC MODELLER'S ASSOCIATION (APMA, PO Box 51, Strathfield, NSW 2135; 4 issues airmail A\$ 18.00).

3/86 (28 pages) "Skyhawk Storyline: The RAN A4G's History" 4 pages including individual aircraft histories, 5 side-view drawings, and 7 drawings of tail markings. "Psychedelic Skyliners" 2 pages including 4 side-view drawings of civil Skyvan (brick-with-wings). "Middle Aged Citizens: The Golden Jubilee of No. 22 (City of Sydney) Squadron" 11 pages including 21 side-view drawings [Gypsy Moth, Demon, Anson, Wirraway (3), Boston (6), Beaufighter (2), Tiger Moth, Mustang (2), Dragonfly, Vampire (2), & Meteor (2)] so that every major type used by the squadron can be modeled. "Tengah Tigers" 3 pages including 3 side-view drawings and top and bottom views of Singapore F-5E's.

#### AUSTRIA

OFH NACHRICHTEN (Oesterrichische Flugzug Historiker, Kannwegasse 1/15, A-1150, Wien).

Last issue received: 2/3-86

PANORAMA (IPMS Austria, Nordmannngasse 11-13/4/6, A-1210, Wien).

2/86 (36 pages) "MiG-19" 5 pages with 1/72-scale 4-view drawing.

#### BELGIUM

KIT (IPMS Belgium, Te Couwelaarlei 103 bus 21, B-1200 Deurne; 4 issues for US\$ 8.00, add \$2.00 for airmail, no personal checks accepted).

Last issue received: #61

#### BRAZIL

EM ESCALA (IPMS Brazil, Rua Arquias Cordeiro, 316 S/502, CEP 20770, Meier, RJ).

Last issue received: 3/86

#### CANADA

RANDOM THOUGHTS (IPMS Canada, Box 626, Stn. B, Ottawa, Ontario K1P 5R7; 6 issues for US\$ 12.00 in US \$13.00 elsewhere).

18/2 (24 pages) "Messerschmitt Me 35B" one page on building the Huma kit. "CF-100 Canuck in 1/72" 2 pages on building the Astra Scale Models vacuform kit. "The J21 of the Flygvapnet" 2 pages on building the Heller kit. "Turbo Mentor Conversion in 1/72nd scale" 2 pages on using the Satra Scale Models vacuform parts top convert the Heller kit. "CAF Hercules" 5 pages of official painting specifications for the C-130E.

#### CZECHOSLOVAKIA

LETECTVI + KOSMONAUTIKA (Best obtained by exchange with a friend in Czechoslovakia). 8/86 (44 pages) "Letadla 39-45: Focke-Wulf FW 187" including one page with one photo and 1/150-scale 3-view drawing. "Monografie: Bell X-1" 4 pages including 8 photos and 1/79-scale 3-view drawings of X-1 and X-1A. "Co Noveho: Kawasaki C-1KAI" 1/2 page including one photo and 3-view drawing. "Z Archivu: De Schelde S-21" 1/2 page including 2 photos and 3-view drawing. "Ptali ste Se: 1/2 page including photos of Sri Lanka MiG-17 & MiG-15UTI. Color photo: Czech Mi-1.

9/86 (44 pages) "Polish Helicopters in Africa" 2 pages including 5 photos of Mi-8 'POLISH RELIEF HELICOPTER SQUADRON in ETHIOPIA' Letadla 39-45: Spitfire HF Mk.VI" one page including one photo and 1/130-scale 3-view drawing. "Monografie: Bell X-1 (Part 2)" 3 pages including 8 photos and 3-view drawing of X-1E. "Z Archivu: Aerfer Sagittaria & Ariete" 1/2 page including 3 photos and 3-view drawing. "Grunau Baby" 2 pages including 6 color side-view drawings and 4 photo.

10/86 (44 pages) "GB II Glider" 2 pages including detailed drawings. "Polish Airmen over the Atlantic" 3 pages including 6 photo and 3-view drawing of Amiot 123.01. "Letadla 39-45: Suchoj Su-8 (DDBS)" one page including one photo and 1/200-scale 3-view drawing. "Male Letectvo: SZD-9 Bocian" 2 pages including 3 photos and 1/72-scale 4-view drawing. "Monografie: Aero A-14, A-15" 3 pages including 3 photos and 4 side-view drawings. "Co Noveho: UTVA Partizan" 1/2 page including one photo and 3-view drawing. "Z Archivu: La-160" 1/2 page including 2 photos and 3-view drawing. Photo: Czech helicopters in formation (Mi-24, Mi-8, Mi-4, & Mi-1). Color side-view drawing of Let L-610.

11/86 (44 pages) "Mig-15UTI 'P'" 2 pages including 5 photos of Czech 15UTI equipped with radar. "GB II Glider" 3 pages including 8 photos and 3 1/83-scale 3-view drawings. "Male Letectvo: SZD-9 Bocian" 2 pages with 2 photos, scale drawings, and 4 side-view drawings. "Letadla 39-45: Republic XP-72" one page including 2 photos and 1/143-scale 3-view drawing. "Monografie: Aero A-14, A-15 (Part 2)" 4 pages including 13 photos and individual aircraft histories. "Z Archivu: SNCASE SE-2410/2415 Grogard" 1/2 page with one photo and 2 3-view drawings. "Ptali Jste Se" 1/2 page including photo of Latvian VEF I-15a and photo & 3-view drawing of VEF I-16. Photo Page: 3 photos of Czech Su-7. Color side-view drawings: Su-8, Ki-10, SM-74, Spitfire HF Mk.VI, XP-72, & FW 187A.

12/86 (44 pages) "Letadla 39-45: Mitsubishi F1M" one page including one photo and 1/125-scale 3-view drawing. "Monografie: Aero A-14, A-15 (Part 3)" 4 pages including 5 photos, 1/62-scale 3-view drawing, and 6 color side-view drawings. "Co Noveho: Aeritalia Partenavia P-86 Mosquito" 1/2 page including one photo and 3-view drawing.

13/86 (44 pages) "L'Oiseau Canari" 3 pages including 5 photos and 3-view drawing of Bernard 191GR. "Letadla 39-45: Airspeed AS-45 Cambridge" one page including 2 photos and 1/143-scale 3-view drawing. "Male Letectvo: Cap" 2 pages including 3 photos and scale drawings of Czech Storch. "Monografie: Nakajima Ki-43 Hayabusa" 4 pages including 7 photos and 6 color side-view drawings (Manchuria & Indonesia). "Z Archivu: SFAN 11L-2" 1/2 page including one photo and 3-view drawing. Photo page: 2 photos of Aero A-18.

14/86 (44 pages) "Dieppe" 2 pages including 3 photos of Czech and Polish Spitfires. "PZL W-3 Sokol" 2 pages including 4 photos and 1/161-scale 3-view drawing. "Letadla 39-45: Bloch MB-700" one page including 2 photos and 1/100-scale 3-view drawing. "Male Letectvo: Cap" 4 pages including 7 photos, scale drawings, and 6 color side-view drawings [(Czech, Soviet, French, & Hungarian (with triangular national insignia))]. "Monografie: Nakajima Ki-43 Hayabusa (Part 2)" 3 pages including 4 photos and 1/55-scale 3-view drawing. "Z Archivu: CAC CA-15" 1/2 page including one photo and 3-view drawing.

15/86 (44 pages) "Dieppe" 2 pages with 4 photos of Czech Spitfires. "Letadla 39-45: Cetverikov MDR-6" one page including 2 photos and 1/200-scale 3-view drawing. "Male Letectvo: Siskin" 2 pages with 4 photos and 1/72-scale 4-view drawing. "Monografie: Lockheed Constellation" 3 pages including 9 photos. "Z Archivu: Kjeller FF-7 Hawk" 1/2 page including one photo and 3-view drawing. Color side-view drawings: MDR-6, F1M2, Cambridge, & MB-700.

#### DENMARK

NYT (IPMS Denmark, c/o Kai Willadsen, Kastellet 54/322 Kobenhavn 0 (01) 12 94 51; 4 issues for 70 Dkr surface, 80 Dkr airmail).  
Last issue received: #33

#### ENGLAND

MAGAZINE (IPMS England, Flat 4, 18 Delancey St., London NW1 7NH; 6 issues for US\$ 20.00 + \$1.00 joining fee).

4/86 (24 pages) "PZL P-7A" 2 pages including 1/72-scale 5-view drawing and a page of drawings of details. "S. Skalski's PZL P-11C" 2 pages including 1/50-scale 3-view drawing of the P-11C '8.66' on which Skalski scored 6 1/2 victories during the September Campaign. "Southern Cessna" one page with side-view drawing of Mexican Navy Cessna 150. (Many thanks to Tony Baldwin for the great review of the SAFO - "For the sheer quantity of information offered, this publication is unbeatable.")

5/86 (32 pages) New format with color. "Israeli Cub" one page including side-view drawing. SAFO member Mick Burton heads up the IPMS (UK) Special Interest Group for "Small Air Forces". SAFO readers in England willing to help Mick please contact him at 30 Stride Ave., Copnor, Portsmouth, Hants., PO3 6HL.

PLASTIC KIT CONSTRUCTOR (PKC, 22 Slayleigh Ave., Sheffield S10 3RB, South Yorkshire; USA: J.J. Daileida, 4314 West 238th St., Torrance, CA 90505; 4 issues \$18.00).

Last issue received: Spring/Summer 86

WIND-SOCK (10 Long View, Chiltern Park Estate, Berkhamsted, Herts., HP4 1BY. Four issues per year; Europe £11.00, Australia/NZ \$30.00 AUS/NZ; USA/Canada \$20.00 US from J.J. Daileida, 4314 West 238th St., Torrance, CA 90505)

3/86 (28 pages) "Building Resin Kits" 3 pages on building the 1/72-scale Berg D-I. "The Amazing AD Scout" 2 pages including 2 photos and 1/72-scale drawings of an unusual aircraft that is available from Libramodels as a 1/72-scale vacuform kit. "The Early French Two-Colour Schemes" 2 pages with 4 photos of French Ni.16 and 2 color chips. "The RAF BE.2" 3 pages including 9 photos. "The Halberstadt CL-IV" 5 pages including 4 photos and 4 side-view drawings (one Estonian aircraft).

4/86 (28 pages) "The AEG DI" 2 pages including 2 photos and 1/72-scale 4-view drawings. "Pfalz DXII Fighter: Camouflage Notes" 7 pages including 11, 2 color chips, & 11 side-view drawings (Belgium). "The 'Biff'" 4 pages including 12 photos. "Anatra DS Anasal" 5 pages including 9 photos and 4 side-view drawings (Czech and Polish). 1/72-scale drawings of Fokker DI. (All the drawings in this issue, except for the Fokker DI by Ian Stair, are by SAFCH member Colin Owers, who is well known for his beautiful and painstakingly-researched drawings. Scale drawings greatly increase the value of WIND-SOCK; please keep

them coming Ray. A welcome innovation by WIND-SOCK is the offer a free plans set, a £1.50 value, with every renewal. I don't know about you, but I always get angry when a magazine offer a reduced price, or a free car, to new subscribers while those of us who have supported them from "year one" have to keep paying the full price. Three cheers for Ray and WIND-SOCK).

#### FINLAND

MALLARI (IPMS Finland, PL 798, 00101 Helsinki 10; 4 issues \$6.50, add \$1.00 for airmail and \$1.50 for cashing personal check).  
Last issue received: #55 3/85

#### FRANCE

LA VITRINE DU MAQUETTISTE (IPMS France, 3 rue de l'Amiral Roussin, 75015 Paris; 4 issues 60 FF surface, 80 FF air, back issues 12 FF, "La Lettre de l'IPMS" 25 FF).

Last issue received: #26

#### GERMANY

MITTEILUNGEN (IPMS Germany, Oertzenweg 12b, 1000 Berlin 37; 12 issues DM 42.00 Europe, DM 49.00 USA, DM 55.00 Japan, DM 61.00 Australia).

7/86 (58 pages) 20th Anniversary Issue. "Opel-Sander RAK.1" 1/72-scale drawings of rocket-propelled glider. "Luftwaffen, die gegen die Alliierten ins Felde zogen" 7 pages with lists of aircraft used during WWII by Bulgaria, Cochin China, Estonia, Finland, Iraq, Croatia, Latvia, Manchuria, Romania, Slovakia, Siam, and Hungary. 8 pages including 1/144-scale drawings of Greenpeace's ship "Rainbow Warrior" (It's not safe, but it's a great idea.) "Lilienthalgleiter" 10 pages including 5 pages of 1/72-scale drawings of Lilienthal's gliders. "Pfalz E.I" 3 pages including 1/72-scale 4-view drawing.

#### ITALY

IL NOTIZIARIO (IPMS Italy, CP 182, 41100 Modena Ferrovia; 4 issues 24,000 Italian Lira in Europe or \$18.00 overseas).

Last issue received: 2/86

JP-4 (JP-4, CP 1550, 50100 Firenze; L 27.000 Europe, L 30.000 elsewhere).

9/86 (102 pages) Color photos: West German Do-28 & Do-228. "Giakarta: Primo Indonesia Air Show" 4 pages including 6 photos (Pakistan MFI-17, Indonesia F-5, Nurtanio Bell-412 & BO.105, and CASA NC.212). "Hannover '86" 8 pages including 16 photos (West German Challenger 601). "Plastimodellismo: I Cobra dei Marines" 4 pages including drawings of details and 5 color side-view drawings.

AEROFAN (Gioglio Apostolo, via Ampere 49, 20131 Milano; 4 issues for US\$ 16.00).

Last issue received: 2/86

#### MALTA

MODELALD INTERNATIONAL (MAI, 206 Old Bakery St., Valletta; 12 issues Europe £17.55, USA & Canada US\$45.35 airmail, Australia AU\$54).

#17 (32 pages) "Modelald Colour Guide" No. 11 Dark Grey & No. 12 Medium Green. "Japanese Air Forces 1935-1945" 2 pages including tables of unit codes. "Fiat G.50" 7 pages including 9 photos (2 of Spanish G.50), 7 side-view drawings (5 Finnish G.50), 3 color side-view drawings, and 1/72-scale drawings (G.50 & G.50bis). "Strikemaster and Jet Provost T.Mk.5" 7 pages including 14 photos (Singapore,

Saudi Arabia, & Oman), 6 side-view drawings (Singapore, Kuwait, Saudi Arabia, South Yemen, & Sudan), 1/72-scale drawings (BAC 145/167 & T.Mk.5). "Grumman F9F Panther" 5 pages including 3 photos, 6 side-view drawings (Argentine), 2 color side-view drawings (Argentine), & 1/72-scale drawings (F9F-2/3 & F9F-4/5). "Air War in Korea: Commonwealth Air Forces" 2 pages with 5 side-view drawings (SAAF Sabre & Mustang and RAAF Meteors & Mustang).

1/87 (32 pages) "Modelaid Colour Guide" #13 Sky Blue and #14 Light Blue Grey. "Japanese Air Force Forces 1935-1945" one page on Naval Air Force markings. "Data File: General Dynamics F-111" 10 pages including 14 photos, 5 side-view drawings (one RAAF), and 1/72-scale drawings of F-111D/E/F. "Gull-Winged Gannet" 6 pages including 10 photos, 5 side-view drawings (West Germany & RAN), and 1/72-scale drawings of AEW.3. "Too Early - Too Late" 4 pages on the Me-262 including one photo, 4 color side-view drawings (one Czech) and 1/72-scale drawing of Me-262A/B. "Air War in Korea" 2 pages including 3 side-view drawings (USAF P-51 and AT-6G).

#### POLAND

TECHNIKA LOTNICZA I ASTRONAUTYCZNA  
Last issue received: 11-12/86

#### SINGAPORE

SCALE PLASTIKS (Plastic Modellers Society Singapore, 32 Mangis Rd., Singapore 1542)

#4 (34 pages) "Recon Report" 2 pages with news from Thailand, Indonesia, Australia, & Singapore. "A-4 Skyhawk: Its Variants" 10 pages including table delineating external differences, list of available kits and conversions, review of Morgan 1/48-scale decals, and 4 side-view drawings (Argentine & Malaysia). "Skyhawks of the RSAF" 12 pages including 8 side-view drawings, 2 plan-view drawings, and 5 drawings of squadron insignia.

#### SOUTH AFRICA

AFRICAN AIR REVIEW (Aviation Society of Africa, PO Box 1413, Alberton 1450; 4 issues US\$ 8.00).

7/8 86 (12 pages) "African news" 2 pages with news of military aviation in Angola, Bophuthatswana, Malawi, Venda, Zaire, Zambia, and Zimbabwe.

9/10 86 (8 pages) "African news" 3 pages with news of military aviation in Angola, Malawi, Mozambique, South Africa, & Venda.

AIR AFRICANA (Published by ASA: see address above)

3/86 (16 pages) "30th Anniversary of the SAAF Sabre" 5 pages including 3 photos, 2 side-view drawings, and individual aircraft histories of all 22 F-86F and all 34 Sabre Mk.6. "SAAF Squadrons: No. 19" one page including one photo and one side-view drawing of SAAF Puma. "Aircraft of the SAAF Museum: Hornet Moth" 2 pages including one photo. "Dakotas in Southern Africa" 3 pages with histories of photos of four SAAF C-47. "Aircraft Modeling" 2 pages of converting the 1/48-scale Mirage IIID/5 into a Cheetah.

4/86 (16 pages) "SAAF Squadrons: No. 27" 3 pages including 2 photos and a side-view drawings of the squadrons P.166 Albatross. "Aircraft of the SAAF Museum: Chipmunk WG354" 3 pages including 3 photos. "Aircraft Modelling: Auster AOP.6" one page on converting the Airfix kit (but no color scheme).

#### SWITZERLAND

VIRUS PLASTICUS (IPMS Switzerland, c/o Mathias Weichelt, Zeltgstrass 27, 3027 Bern; 4 issues for Sfr 24).

3/86 (28 pages) "Grumman E-1B Tracer; Part 1" 9 pages including 8 photos and 6 side-view drawings (USN TBM-3W, AD-4W, EA-1E, E-1B, E-2B, & E-2C).

#### USA

WWI AERO (Leonard Opdycke, 15 Crescent Rd., Poughkeepsie, NY 12601; 5 issues \$ 20.00; tax deductible).

#112 12/86 (114 pages) "Historiography" 8 page articles on using photos to verify the accuracy of scale drawings - photographs of the Albatros D-II (including one in Polish markings) are used to comment on 17 side-view drawings. "The Nieuport Triplanes" 6 pages including 6 photos. "Antoinette Monobloc" 4 pages including 3-view drawing and 10 photos (also 3 photos of the similar Tunison Scout of 1929). "Spettacollo Aeronautico" 4 pages including 5 photos and one 2-view drawing of early Caproni aircraft. The first of a series. "Cockpit/Instruments" 9 pages including 22 photos and index of previous 12 parts of this series. "Archiv" 3 pages of further analysis of the Cockburn-Lange photos by Peter Grosz shows that they are photo of not very accurate models. (Congratulations to Leo Opdycke on 25 years of publishing WWI AERO and also many thanks to for his nice review of the SAFO in which he says "Such a good one, and getting bigger and better all the time.")

DIRTY PLASTIC (IPMS Phoenix, 509 W. Camino Dr., Phoenix, AZ 85021; 4 issues for \$6.00 USA or \$9.00 elsewhere).

Last issue received: Fall '86

IPMS HAWAII (1650 Lehia St., Honolulu, HI 96818; \$5.00 for mainlanders and \$6.00 for those overseas).

22 (16 pages) "The Flight of the R-6" 3 pages including 3 photos and side view drawing of the aircraft that made the first inter-island flight in Hawaii. "What Color is that Japanese Cockpit, Really?" 6 pages including 4 photos, drawings of 16 instrument faces, and 4 color chips.

23 (12 pages) "One Sunny Sunday on Niihau Island" a 7-page account of the crash of a Zero (photo included) on a little Hawaiian island and the ensuing battle in which "a native group of Hawaiians, without modern weapons of any kind, out-maneuvered and destroyed a modern and fully equipped enemy who had gotten the upper hand by treachery." Included are 12 seldom-published photos of the devastation at Pearl Harbor.

PRI-FLY (IPMS Washington DC, c/o Carol Fleckenstein, 1810 Michael Faraday Dr., Suite 101, Reston, VA 22090; 4 issues \$6.00 for US, \$7.00 all others).

#61 12/86 (16 pages) "Letov S-231" one page review of the KP kit. "Yakovlev Yak-15" one page review of the Pioneer kit. "BAe HS.125/Dominie" 2 pages on building the Airfix HS-125 in Brazilian Air Force markings including 4 side view drawings (Brazilian and Argentine). "Getting Out in a Hurry" 2 pages on the Stencil ejector seat for the TA/AV-8a & FRG Alpha Jet. "Cramped, Cold, Comfortless" one page with drawings of Junkers D.I & MS Parasol cockpits.

Continued on page 26

# MACCHI M.7 SEAPLANE FIGHTER

During the WW I, Italy's primary coastal fighter in the Adriatic Front was the Macchi M.5 flying boat. But, when the Austro-Hungarian Navy introduced landplane Phoenix D-types in single-seater was necessary to counter the speedier Phoenix. Unwilling to abandon the flying-boat formula, Macchi chose to up-engine the M.5 with the 250-hp Isotta-Fraschini V-6B. They also changed the wing cellule to a more conventional single-bay arrangement with paired interplane struts. The resulting machine was both smaller and heavier, but appreciably faster than its 160-hp V-strut sesquiplane predecessor. Series production was ordered, but only three Macchi M.7's became operational before the Armistice.

The original M.7 featured the same fuselage/hull as the M.5. The planing bottom started as a standard double-concave ("V") surface, but changed to a single-concavity in front of the step. The cockpit opening extended down to the hull sides, and the "butterfly-wing" rudder of the M.5 was retained. The wings were completely new: the lower wing was enlarged in all dimensions, while the upper planes was shortened, resulting in the more conventional biplane cellule. Peacetime production was not as ambitious as wartime requirements, but in addition to Italian orders, Sweden and Argentina purchased two two M.7's each, while Brazil acquired three.

Pursuit of the Coppa Schneider, or "Flying Flirt" as the Italians called the Schneider Trophy, led Macchi to modify some aging M.7's to complete in the 1921 event. Two aircraft, with 7 ft 3 in. clipped from their wings, were entered as M.7bis'. Giovanni de Briganti, in the slowest of the racers, outlasted all other competitors to win the "Cup". His M.7bis was the sole finisher! Another M.7bis, I-BAFV, participated in the 1922 race, but it finished well off the pace in 4th place.

A virtually complete re-design of the Macchi M.7 resulted in the M.7ter, which first took to the air in October 1923. The entire airframe was altered and lightened. The hull was completely new, with a deeper V-shape planing bottom, a wider and blunter nose, and a squarer, smaller cockpit opening. The fin and rudder were slightly enlarged and revised, while the wings revealed a differed planform and reduced area. Since the span remained the same, I assume that the chord was narrowed to decrease the wing area. The new fighter retained the Isotta-Fraschini V-6B engine and the twin Lewis gun armament of its immediate predecessor. Series production of over 100 aircraft started with the M.7terA. The M.7terAR, for "ali ripiegabili" or "folding wing", was introduced to operate from the seaplane carrier Miraglia. The fixed center section of the upper wing was straight, wing sweepback starting with the outboard panels rather than at the centerline as on all prior Macchi flying-boat fighters. The 480-hp Lorraine 12Db engine powered the M.7terB variant, and 14 M.7terA's were re-engined with the 250-hp Isotta-Fraschini Smi-Asso 200. By 1925, the M.7ter of various sub-types equipped all six Italian Naval Fighter Squadrons. Withdrawn from frontline service in 1939, these

excellent machines served in numerous lesser capacities right up until World War II.

## Macchi M.7 in Profile

(1) This is a typical early Italian M.7, No. 20781. The fuselage and floats are varnished wood with light gray undersurfaces, while the wings are clear-doped linen. The upper cabane and interplane struts are dark wood wrapped with light gray tape. The engine support trestle, cowl panels, and machine gun fairings are either silver or gray anodized metal. Markings include a green-white-red (front to back) fin/rudder, and similarly colored roundels, with the green outermost, on the side of the fuselage, on top of the upper wing, and under the front hull. The undersides of both wings, from the aileron inset outwards, are painted green (starboard) and red (port).

(2) Another Italian M.7 of 1918 vintage, this one is finished the same as the machine above, but the colors of the markings may be reversed. Roundels appear to be red-white-green (red outer) while the wing tips seem to have green to port and vice versa. Red and black diagonal bands straddle the cockpit.

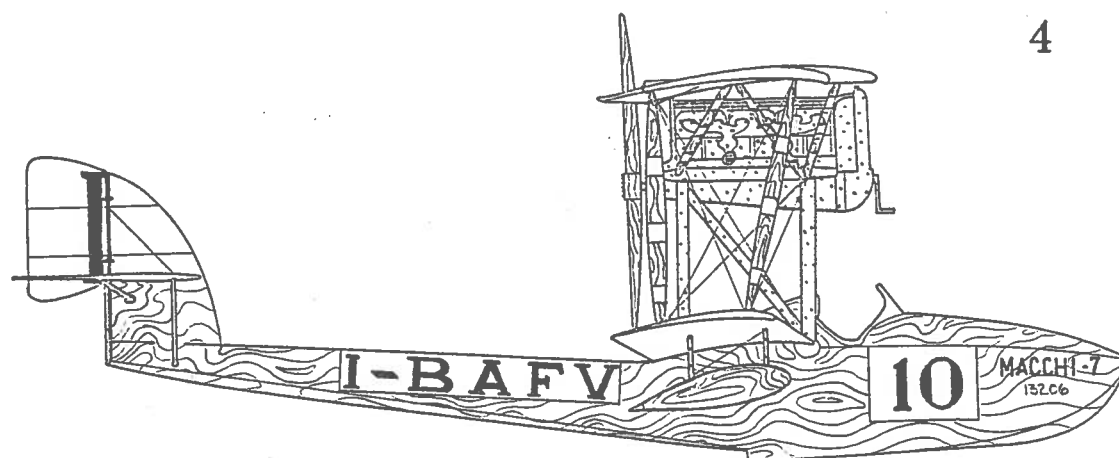
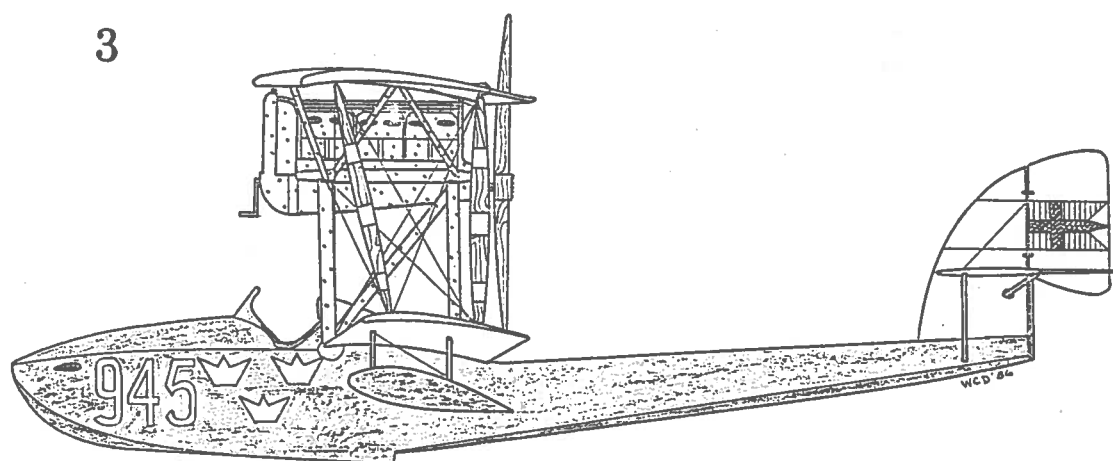
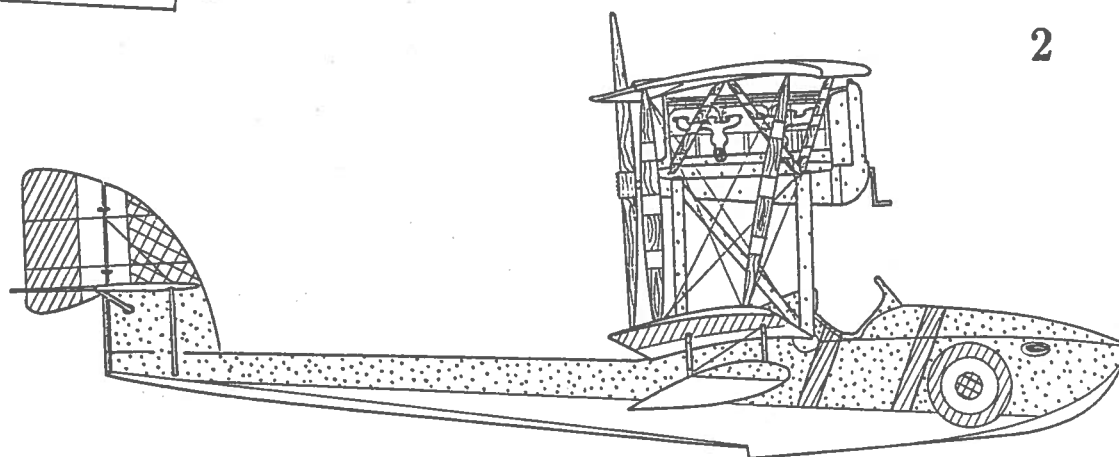
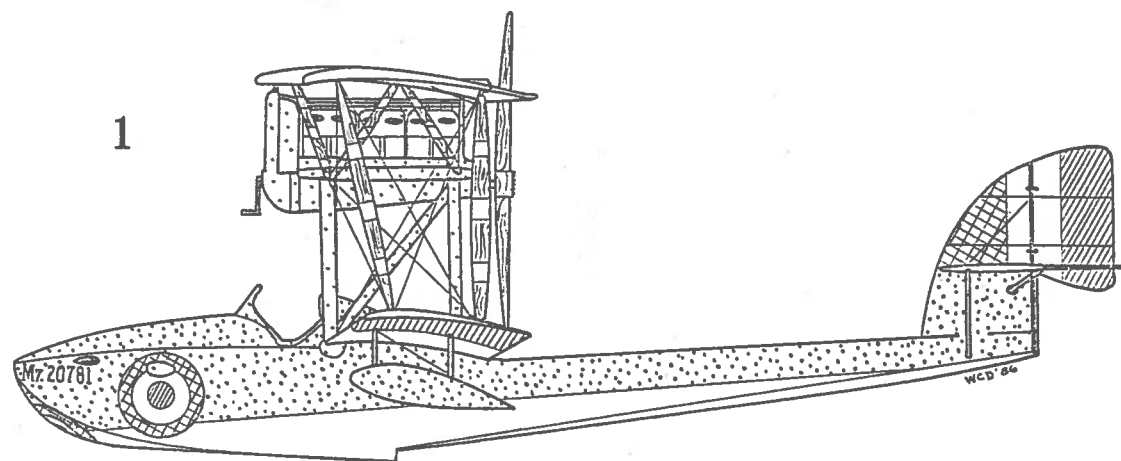
(3) One of the pair of M.7's used by Sweden in 1920-1921, No. 945 is preserved at the Swedish Air Force Museum, Malmslätt. The hull is a solid dark color, probably a dark gray-green; the wings and tail are lighter, and may be natural wood and fabric. The fuselage numbers and insignia are white, while the triple crown national insignia are in four positions on the wings. A light-blue and yellow Swedish War Ensign "flies" from the rudder.

(4) The clipped-wing M.7bis MM.13206 that placed fourth in the 1922 Schneider Trophy Race was finished overall in natural wood and fabric. Black civil registrations I-BAFV were probably carried above the port upper wing and below the starboard lower wing and on white panels on the sides of the hull. The black race number "10" was painted on a similar white panel on the front of the hull. The Macchi identifiers and Italian "I" registrations appeared in black on the nose and rudder, respectively.

(5) A beautifully-finished M.7terAR MM.25441 resplendent in natural wood and silver dope. The hull bottom is light gray and the engine cowl panels are dark gray. The entire empennage is green-white-red striped, and the upper wings probably carried the red diagonal "anti-camouflage" stripes. The front hull top appears to be a very light gray or off-white, trimmed in black. The handhold forward of the cockpit is marked in black with a thin white line on the hull side. Note the position of the gun ports.

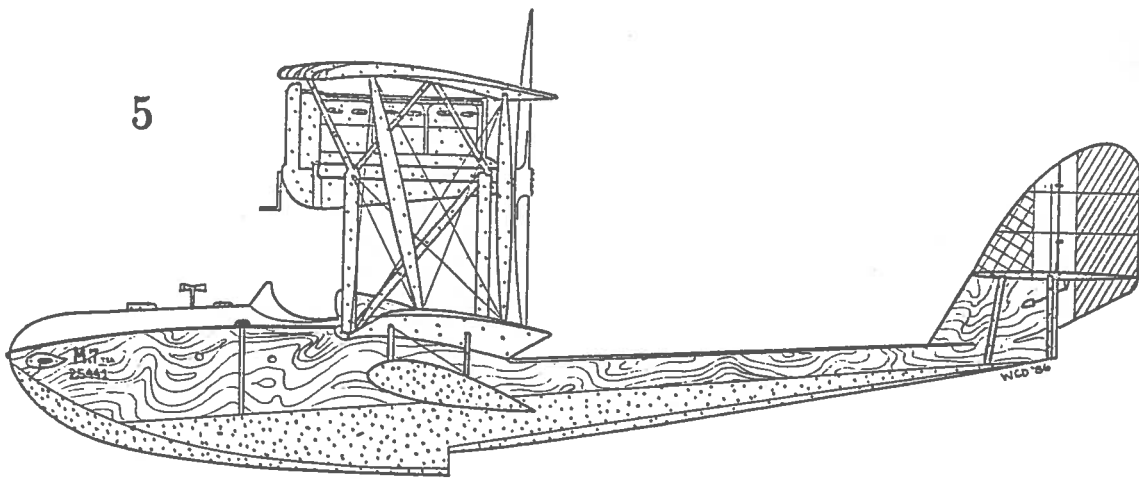
(6) A standard M.7ter MM.24409(?) finished in natural wood, with a light gray hull bottom and clear-doped fabric flying surfaces. The tail section is striped in green-white-red (green forward). No other insignia are carried.

(7) This silver-doped M.7ter MM.25413 was still serving at Portorose in 1937 when it was

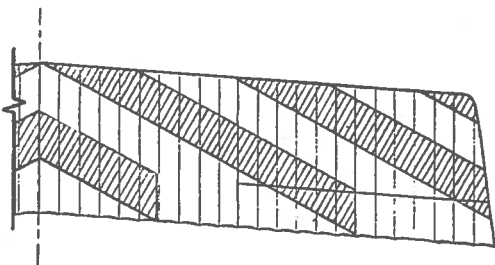




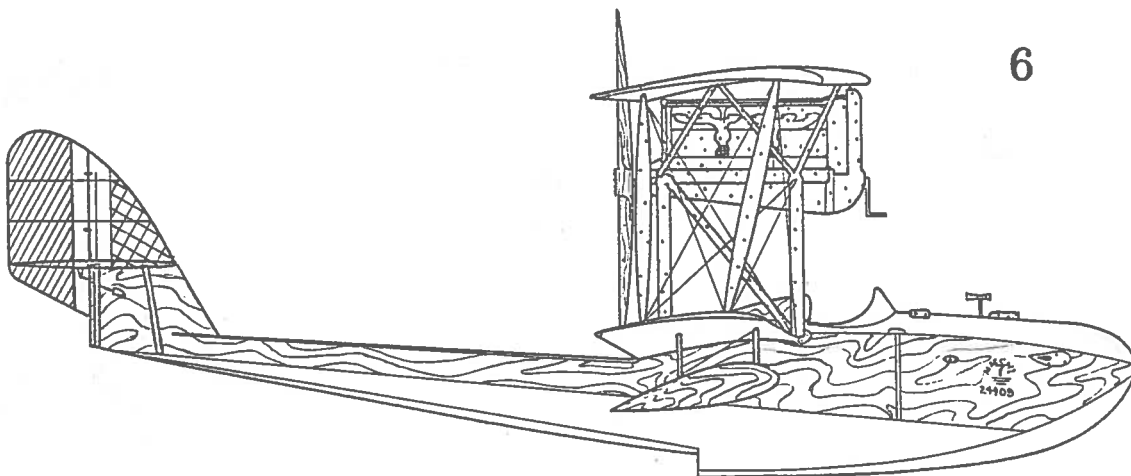
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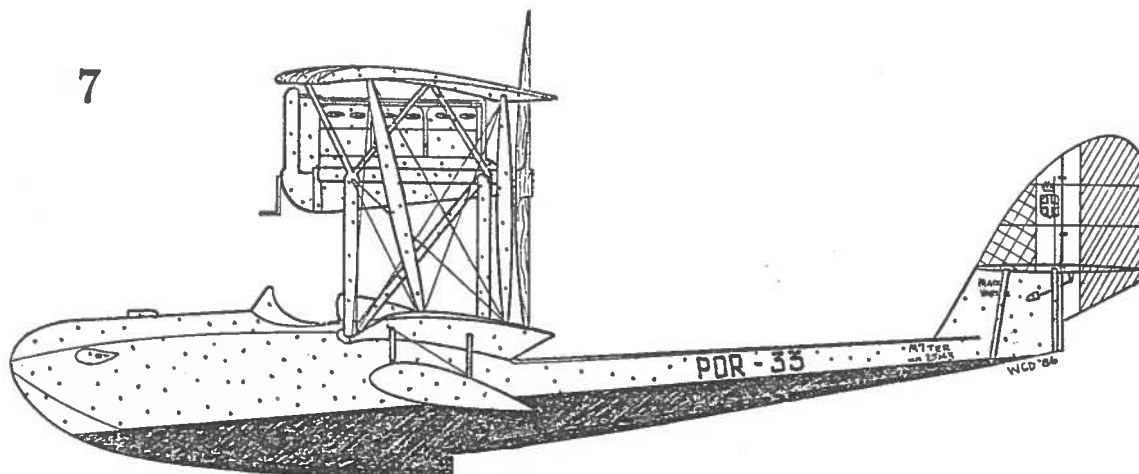
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wrecked. The hull bottom and station identification (POR-33) were black. The empennage was once again stripped overall in green-white-red, but this time the Coat-of-Arms of the House of Savoy had been added to the white stripe on the fin. This machine may have had diagonal red "anti-camouflage" stripes on the top of the upper wing.

### Libramodels' Macchi M.7

This kit is the third in a series of WW I aircraft marketed by a new English company called Libramodels. The major airframe parts are molded on a 5 in. by 7 in. piece of white 0.030 in. styrene. All plane surfaces, including the fin/rudder, are provided as a single thickness, which is fine for such small-scale replicas. Rib and control-surface detail is nicely portrayed on the uppersides, but will have to be scribed on the undersides. Some molding pips appear on the wings. The five-piece interior incorporates some nice detail, as does the radiator. Two lengths of Contrail airfoil struts and one of rod are included, along with a true-length strut template molded into the backing sheet. A beautiful and accurate metal engine and propeller from Aeroclub are provided, as is a decal sheet offering 6 rather indifferent Italian roundels. Complete step-by-step assembly instructions, including 1/72-scale three-view drawings, round out a very well presented and comprehensive package.

Judging from the plans, the pattern-maker (J. Chubcock) relied heavily on the drawings in the Harleyford book, but with some compromises. This is not altogether bad, as the Harleyford plans leave a little to be desired, and are actually closer to depicting the 1923 M.7ter as opposed to the 1918 M.7. The kit's fuselage lacks the blunt, fuller nose and deep-V planing bottom of the M.7ter, nor do they have the complex double-to-single concave hull of the early M.7. Additionally, the fuselage aft of the step is too shallow and is angled upwards too sharply, errors apparently compounded by the Harleyford plans. The wings and tail appear to be useable for most M.7 variants; a slight reduction in chord is required for an accurate M.7ter. The fin and rudder are representative of the M.7ter. The halves of the small wing float were not fully drawn into the mold cavities, a shortcoming noted in the instructions. The remedy they propose, filling the floats with putty and sanding them down, will not work because the floats are undersize. I recommend assembling the floats and then wrapping a piece of 0.010 in. sheet around the outside, top and bottom, and filling in the unmolded areas. Then, sand down the edges until the correct shape is achieved. Finally, a windscreen will have to be fabricated from clear plastic sheet and added to the fuselage.

This kit suffers because of the lack of solid information on the type. I'm sure Libramodels wanted to represent a WW I aircraft, although very few M.7's were completed before the end of hostilities. They probably would have been better off with an M.5 or an M.5mod, but the case is not hopeless. The kit as it comes can most easily be made into the early M.7 by reshaping the fin and rudder, and sanding the bottom of the hull to the correct shape. The excessive upsweep of the rear hull should be corrected by sawing through the hull immediately above the step and adding a wedge to reduce the upsweep. Then, use 0.030 in. sheet to build up the height of the rear fuselage, add a rear cockpit fairing, and you should have a pretty fair representation of the Macchi M.7. The Macchi M.7bis can be constructed by following the above steps and trimming the wings. Making a Macchi M.7ter will require building a whole new fuselage.

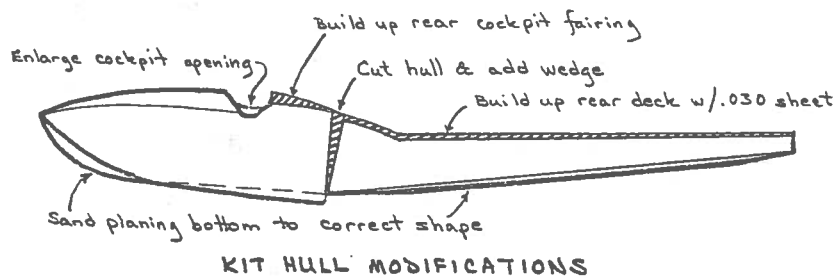
The Libramodels kit of the Macchi M.7 is a complete and well-produced item, and it bodes well for the WW I fan. I can't see it being any more difficult to build than a similar injection-molded subject. It does fall down a bit on accuracy, as is common with limited-run kits of all types. A little extra research will go a long way when building kits of such off-beat subjects. All in all, a very promising development.

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Bill Devins (SAFCH #557), 107 Troy Hills Rd., Whippany, NJ 07981



## Aviation in the Dutch East Indies

40 JAAR LUCHTVAART IN INDIE, A Survey of Aviation in the former Dutch East Indies by Casius and Postma. Amsterdam Airport Aviation Mailorder Dept., PO Box 7544, 1118ZG Schiphol, the Netherlands. Price: DFL 49.50 plus DFL 7.95 postal charges anywhere in the world (surface mail).

"On 30 May 1986 the first copy of a unique book was presented to Lt. Gen. A. B. Wolff, retired Chief of the Netherlands Air Force Staff. This book is the first ever published which covers all aspects of aviation in the East Indies: airlines, army and naval air services, aerial exploration, sports flying and gliding, from the earliest pioneering days until 1950 when the territory became the Republic of Indonesia.

"The very comprehensive text covers the interrelation of the various aviation organizations in the Indies, their strengths and weaknesses. It comprises a unique range of exotic subjects, including early private flying, explorations of stone-age New Guinea, the largest and most modern civilian airline in the Far East before WW-2, combat operations against Indonesians in 1949, etc.

"The book is illustrated with more than 500 photographs, the majority of which have never been published before. In addition, there are a number of beautiful color paintings by Thijs Postma, and maps showing the important geographical locations.

"Gerard Casius used his experience of many years of research and interviews in many countries to produce the well-documented narrative. Thijs Postma produced the book and used his well-known creative talents for the beautiful artwork, lay-out, and photographic reproductions.

"The book is hard-bound, contains 152 pages, and includes complete photographic and technical coverage of all types of aircraft which flew in the Dutch East Indies. (Ever heard of a Walraven W-2 or the Van Berkel WB?)"

"I would like to have my book announced in the SAFO. The Dutch language will be a handicap, but we have really managed to include fantastic photographs which will excite a lot of the SAFO readers. For instance:

"An American Breguet 14, on floats, used by a Smithsonian expedition in New Guinea. Martin TA, TT and R biplanes of the NEIAF (1914-20). Friedrichshafen and license-built Brandenburg biplanes used by the Dutch Navy in the Indies. Barnstormers using German LVG's and Albatrosses at Java. Fokker's of all descriptions - D-VII, C-4, DC-1, C-5, C-10, F7b-3m, T-4, etc., you name it, in exotic color schemes, Army and Navy. DH-9's, 'pure' and converted as ambulances, with P&W Wasp engines, homebuilt in series production at Java; likewise Avro 504, DH Moths, Waco's, Koolhovens, Buecker Jungmanns. Extensive coverage of Sikorsky S-38 and S-43, Grumman Goose and Mallard, PBV Catalina's, civilian as well as military. Martin 139, Hawks, Buffalo, Dornier 24, Lockheed 212, Ryans, Curtiss Interceptors and Falcons. Post-war combat operations of Spitfires, Fairey Fireflies, P-51 and B-25, and what surely must be the last combat use of the Curtiss P-40's (1947-49). Photographs of P-40's, B-25's, Lockheed 12's and Beech AT-11's being operated over the USA (Jackson, Miss.) for over 1-1/2 years with Dutch military insignia. A Mitsubishi Ki-57 Topsy operated in Dutch insignia post-war (this

was necessary because many of the remote fields in the interior only had low-octane Japanese fuel, unsuitable for C-47's. The Japanese planes were mostly flown by Japanese pilots.)

"Anyway, I could go on for a while. Not to forget the beautiful color paintings of Thijs Postma. As the press release states, the book can be mail ordered from Holland. The price of Dutch guilders 57.45 includes postage, and is equivalent to approximately US \$26.00. I would suggest a postal money order, as personal checks are an unusual phenomenon in Europe and often incur something like \$4.00 bank charges to be cashed."

Jerry Casius (SAFCH #649), 91 N. Main St., Cedarville, NJ 08311

"40 JAAR LUCHTVAART IN INDIE, an A4 size hardback by Gerard Casius & Thijs Postma is a complete history of all aviation activities in the former Dutch East Indies from 1910 to 1949. The text is in the Dutch language, but with many photos (at least 3 per page), some of which are extremely interesting, plus 10 colour paintings. Anyone with a Dutch dictionary should have no real problems understanding the text. All aviation activities are covered, including the beginning of military flying in the Indies, the history of ML-KNIL (Army) and MLD (Navy) flying, airline developments, and private flying; there's even a chapter on gliding activities. This book is simply a must for anyone interested in this hitherto neglected area. The only quibbles are very minor - it's a pity there's not a list of ML-KNIL serial numbers, and a list of NEI civil registrations would have been welcome - but I suppose one can't have everything."

John MacGregor (SAFCH #766), 13 Foggyley Gardens, Dundee DD2 3L6, SCOTLAND

## Windsock Datafiles

WIND-SOCK DATAFILES: #1 ALBATROS DIII and #2 SOPWITH PUP, Albatros Productions Ltd., 10 Long View, Chiltern Park Estate, Berkhamsted, Hertfordshire, HP4 1BY ENGLAND.

The first two volumes of this new series by Ray Rimell, publisher of Wind-Sock, each consists of 24 pages (21 cm by 29.5 cm) with glossy card covers. These two books are very similar in format so a review of the Albatros book should suffice for both. There is only one page of text and this is mostly devoted to a developmental history with only a few paragraphs on the operation use of the aircraft. The remainder of the book consists mainly of 32 photos (no more than 3 per page) with extensive captioning. The covers are graced with 4 excellent color side-view drawings and the "center fold" is a 1/48-scale 4-view drawings (with cross sections) by Ian Stair of the D.III with a similarly scaled side-view drawing of the Oeffag-built D.III, 53 Series. These drawings are repeated in 1/72-scale on a single page. Also included are a page of interior sketches from the official Albatros manual and a 2-page discussion of "Albatros D.III Colours" with Methuen color references.

A description of the Pup book would be identical and, I assume, so will be the next two books of the series - the ALBATROS DV/DVa and Bristol F2B FIGHTER.

Although these first two books have little of interest to the hard-core small-air-force enthusiast (except for the drawing of the Oeffag Series 53 aircraft), the book is a high quality publication with well reproduced photos

and excellent scale and color drawings and this series can be highly recommended to anyone interested in WWI aircraft.

### Over the Front with the League of WWI Historians

OVER THE FRONT. \$25.00 for 4 issues, make check payable to League of WWI Historians and send to L. Kerr, Treasurer, PO Box 780265, Dallas, TX 75378-0265. Overseas subscription rates are higher; send IRC for details.

CROSS AND COCKADE USA is no more, but many of the personnel associated with this former publication are now contributing to OVER THE FRONT. The premiere issue (Vol. 1, Number 1, Spring 1986) consists of 96 pages sturdily bound between glossy stock cover with many well reproduced photos. A list of the articles should suffice to give an impression of the contents: "Fierce Days and Nights in Flanders", "Jack Malone, The First Ace of Naval 3", Hans Pippart, An Ace from Baden", "Combat History of Groupe de Combat 23", "No Greater Love, The Story of Lt. Wilbur White", "The Ordeal of Alan Winslow", and "Summary of the Career of Silvio Scaroni". Departments include "Colors", "Mentioned in Dispatches", "Taps", and "Between the Bookends".

Needless to say, most on the articles are about flying for the German, French, English, and American air forces, but the small-air-force enthusiast may not need to despair; the Italians get their fair share in this issue and I imagine that the other smaller combatants will get their due occasionally. The summary of the career of Silvio Scaroni provides 7 photos of Hanriot HD-2's in Italian markings as well as a "Victory List" that might permit some cross correlation with Martin O'Connor's book on Austro-Hungarian Aces. The photo gallery includes photos of one of the little Caproni-Pensuti triplanes and an Italian Nieuport 11. For the modeler, the most interesting part of this issue is "Colors" by SAFCH member Greg VanWyngarden. This article consists of 8 pages on the Italian Nieuport 17's, including 8 photos (Nieuport 10 and 11 as well as 17) and 8 side-view drawings of Nieuport 17's. The text is well researched and intelligently written. This text along with the drawings should allow the modelers to finish either a Nieuport 11 or 17 in accurate Italian markings.

The dedicated small-air-force enthusiast should keep an eye on each issue of OVER THE FRONT, because there will undoubtedly be some gems of articles on the small countries that participated in WWI (Bulgaria, Turkey, Rumania, Serbia, etc). The modeler of WWI aircraft should find every installment Greg VanWyngarden's series on colors of interest. If you are wondering whether either, or both, of the above reasons are sufficient to justify the \$25 per year expense of a subscription, ask yourself if you enjoy stories of combat over the trenches. If the answer to this question is "yes", then OVER THE FRONT is definitely for you.

### Aircraft of the Golden Age

SKYWAYS: THE JOURNAL OF THE AIRPLANE 1920-1940 is a new magazine edited by Kenn Rust (remember the magnificent AERO ALBUM) and published by Leo Opdycke of WWI AERO. The first issue is scheduled to be published in January 1987 and should be out by the time you

read these words. I haven't seen this magazine, but given its pedigree it should be a great one. Let me quote from the announcement that appeared in WWI AERO #112:

"As its full title suggests, SKYWAYS will be concerned with the airplanes of the 20s and 30s, and to provide the greatest possible assistance to those interested in restoring, reproducing, or scale-modeling such aircraft. It will also be a forum where men and women share their knowledge and materials.

"Each issue will have two or three main articles, plus a number of departments. One of these, to run through the first 8-10 issues, will be Chronology Highlights for each of the years in SKYWAYS' period, to establish the character of the period through the important events and machines which moved aviation forward, and to inspire builders of every scale to take on projects they might not have considered before.

"Other department will offer specifics on Engines, Cockpits, and via test reports the aircraft themselves, both well- and little-known types. A Models section will show work in various areas of scale modelling of this period; a Drawings department will provide quality drawings, structural and 3-views. A Racers department will treat these types, world-wide; a Famous Types section will treat the development of important types which were produced in a series of differing models.

"Reviews will cover books and other publications; Organizations will deal with the work of different groups and their various facilities and projects; Wants and Disposals will list items as we hear of them to assist members in their work.

"We are starting on the basis of 4 issue/year, with the same contribution scheme as with WWIU AERO: members contribute what they think best, starting with a minimum of \$20. Payments can be made in conjunction with or separate from payments made for WWI AERO - checks can be made to SKYWAYS, WWI AERO, or WWI Aeroplanes Inc., and sent to the NY address - but money sent to California will arrive OK just the same. Editorial Office: Box 3366, Glendale, CA. 91201. Publishing Office: 15 Crescent Rd., Poughkeepsie, NY 12601."

### Tiger Moth from Aeroclub

DH-82 Tiger Moth, 1/72-scale injection-molded kit by AERO 72. Aeroclub Models, 5 Silverwood Ave., Ravenshead, Nottingham, NG15 9BU, ENGLAND. No price given.

Aeroclub is justly famous for their white-metal accessories and their vacuform kits have received good reviews, so you can imagine my surprise upon opening a package from Aeroclub to find an injection-molded kit. My initial pleasure at discovering a new manufacturer of injection-molded kits was quickly dampened by the choice of subject; with all the aircraft types crying to be kitted, why choose a type that has already been done? In an attempt to find an answer, I got out my old Airfix kit and the drawings from the March 1961 issue of AERO MODELLER and did some serious thinking.

The Aeroclub Tiger Moth is a "limited run" kit molded using a low-pressure system and it has all the limitations associated with this process - heavy gates (no problem if you use a razor saw to remove the parts), blunt trailing edges, and mushy details. These limitations are partially compensated by the inclusion of white-metal parts for the seats, propeller,

main wheels, tail wheel assembly, and venturi tube. The rib simulation on the Aeroclub kit is more subdued, and probably more realistic, than that of the Airfix kit, but for some reason the nose ribs are molded as sunken lines rather than as raised detail. The wing slats on neither kit is very effective and the modeler may want to remove this detail entirely (as they were on many real Tiger Moths) or cut out the slats and model them to the open position. The trailing edges on the Aeroclub kit are not that bad, but they still look strange to me. Since filing down the trailing edge would remove some of the rib detail, I would probably leave well-enough alone.

Wing and landing gear struts are provided for by several lengths of round and streamline rod. This requires much more work than needed with the molded parts in the Airfix kit and the resulting structure would probably be quite fragile, but the finished parts would be closer to scale.

A definite advantage of the Aeroclub kit is that alternate parts are provided for making either a DH-82A or a Canadian-built DH-82C2 Menasco Moth. The parts need for the Menasco Moth include a different nose cowl, a tail wheel assembly, and a full canopy. This latter is one of the clearest vacuformed canopy I have ever seen. (Manufacturers providing vacuform canopies in kits should consider shipping these on a plastic form; this would prevent damage in shipping and would provide a mold on which the modeler could form another canopy if the original is damaged during construction.)

The Aeroclub instruction sheet is excellent, consisting of written instructions (including the lengths of all struts to be cut), an exploded drawing, 1/72-scale 5-view drawings of a DH-82A, a side-view drawing of the Menasco Moth, along with drawings of the instrument panels, radio installation, and other details.

The decal sheet is of excellent quality and provides full markings for both an RAF Tiger Moth and a RCAF Menasco Moth. The red centers of the roundels are provided as separate decals to avoid any serious problems with the registration.

Comparing the two kits to the AERO MODELLER drawings reveals an interesting difference. The wing sweep on the Airfix kit is same for top and bottom wings and a few degrees less than that shown on the plans. The sweep of the wings of the Aeroclub kit match that of the drawings both in angle and in that the sweep of the top wing is greater than that of the bottom wing. I don't know if this difference will be noticeable on the finished models, but it sure will keep the nit-picker busy.

The Aeroclub Tiger Moth is a disappointing choice of subject, but the kit is well produced, includes metal parts and excellent decals, and the choice of an alternate version is imaginative. Since a great deal of modeling skill is needed to "scratch build" the landing gear, this kit can be recommended only to the experienced modeler. However, all modelers can look forward with great anticipation to future releases in the Aeroclub line of injection-molded kits.

The review copy was kindly provided by Aeroclub.

## A Vacuform P-51B/C in 1/72 Scale?

NORTH AMERICAN P-51B/C MUSTANG, 1/72-scale vacuform kit by JMK Poland.

In the West, a 1/72-scale vacuform kit of the P-51B Mustang would be met with all the enthusiasm afforded to a Playboy magazine at a nudist camp. However, in Poland, where the Monogram kit is difficult to obtain, and the Mustang has nationalist importance because of its service with the Polish squadrons in the RAF, such a kit is probably most welcome.

You may legitimately ask, why is this kit being reviewed in the SAFO? I am reviewing it here because it is, without a single doubt in my mind, the finest vacuform kit ever produced, bar none. This kit is the standard by which everyone who either produces or builds vacuform kits should compare their products.

First, the usual specifications. The kit is molded on a single sheet of medium-thickness white plastic 16 cm by 2 cm. The 40-some parts provide everything needed to build the model including a 7-part interior and drop tanks. Two vacuform canopies are provided, one for the normal canopy and one for the Malcolm hood. The decal sheet provides the markings for 3 different Mustang IIs: 'FZ152' flown by Stanislaw Skalski and coded 'SS'; 'FB166' flown by Eugen Horbaczewski and coded 'PK-D', and 'PK-N'. Squadron insignia, victory and mission markings, and the small Polish 'chessboard' are all included on the decal sheet. The box top is an exciting color painting of a Polish Mustang in action and on the back of the box are color side, top, and bottom views of the aircraft provided for on the decal sheet.

While all this adds up to a pretty impressive vacuform kit, the outstanding thing about this kit is the quality of the molding. All the parts are concisely molded. The surface detail is inscribed and is of sharpness and subtleness that would shame most injection-molded kits. Of special note are the detailing of the wheel hubs and the instrument panel where the gauges seems to have needles and numbers.

Even as good as this kit is, I can think of some ways that it could be improved, although at some additional cost. White metal parts for the wheels, landing gear, tail wheel, propeller, and seat would reduce construction time. The vacuformed canopy was damaged in shipping; if this part were taped over a mold of the canopy it would have been protected from damage and if damaged, either in shipping or during construction, the modeler could use the mold to form his own canopy. The biggest improvement to the kit would be to change it into a PZL P-38 Wilk (and this would cost any more).

This kit will be more difficult to build than the Monogram kit, but the finished product should be a much more impressive model.

The manufacturer of vacuform kits should have the kit framed and placed over his drafting table as a reminder of what can be done. The builder will want to see this kit to have a standard on which to judge all other vacuform kits, but I suspect that most kit will built just for the pure pleasure of building an excellent kit. SAFCH Sales Service has only one kit in stock, and this will, of course, to sold on a first-come-first-served basis. However, don't let this dissuade you from ordering, for I can get more from Poland as soon as I know the extent of the demand.

## A Polish Eagle in 1/72 Scale

PZL-130 Orlik, 1/72-scale vacuform kit (with decals). Zabawkarstwo, Marek Praszczyk, ul. Rozana 17/2, Wroclaw, POLAND.

Kits of military training aircraft, either injection-molded or vacuformed, are not exactly cluttering up the shelves at your local hobby shop, so the release of a new kit of an member of this important and attractive class of aircraft deserves special notice. Furthermore, when the kit represents a military aircraft of recent design that is powered by an air-cooled radial piston engine, then it is unusual.

The Polish aviation firm of PZL is probably better known to modelers for such attractive pre-WWII aircraft as the P-11c gull-winged fighter, the P-23 Karas light-attack aircraft, and the P-37 Los twin-engined bomber. All these aircraft are represented by excellent injection-molded kits and undoubtedly occupy a place of honor on the shelves of all modelers of the aircraft of the small air forces. The real enthusiast of pre-war Polish aircraft can legitimately wish for kits of the various variants of the P-11 theme such as the P-7a and P-24, a kit of their elegant liaison aircraft the L-2, and any of the several exciting prototypes produced by PZL in the late '30's such as the P-38 Wilk, P-50 Jastrzab, and PZL-46 Sum. PZL's post-war stabiles is just as attractive, but it is almost completely ignored by the manufacturers of kits. A poor, and hard-to-find injection-molded kit of the TS-11 Iskra jet trainer does exist, but nothing has been done about the PZL-104 Wilga in any of its exotic configurations, not to mention the series of purposeful-looking agricultural aircraft with such names as Belphegor, Kruk, and Dromader.

The most recent PZL design, the PZL-130 Orlik (Eaglet), represents a rather radical change in training philosophy by attempting to provide a low-cost, fuel-efficient aircraft that introduces the beginning student to the special flight characteristics of the combat aircraft that they will ultimately fly. This should result in substantial cost savings, not only because of the low operating cost but also by early elimination of students unlikely to be able to handle high-performance aircraft. The resulting aircraft is an attractive machine with low-aspect ratio wings and a jet-like nose. A model of this aircraft on the contest table or in your display case is guaranteed to bring a "What's it?" from even the most jaded judge or modeling buddy.

The 1/72-scale vacuform kit of the Orlik is apparently the first kit produced by Marek Praszczyk, and a very creditable kit it is. Molded on a single 23-cm by 15-cm sheet of medium-thickness white plastic, the 29 parts are generally crisp with well-defined corner were the part joins the backing. Surface detail is engraved, and while a little exaggerated (similar to some of the early Matchbox kits), the lines are straight and clean and will probably look all right after a little sanding and a coat of paint. Interior detail is a minimum, consisting only of a cockpit floor with molded-in seat cushions and separate seat backs. The propeller appears to be useable which is a good thing because it is so small in diameter that unless your spare-part box contains some 1/144-scale parts, you might be pressed to find a suitable replacement. The large canopy is molded on

commendably thick clear plastic, but the surface is rather uneven and since the canopy is such an important part of this aircraft, serious thought should be given to investing the time needed in making a mold and vacuforming a replacement.

The text on the instruction sheet is in Polish and while it probably contains much important information, the exploded construction diagram will allow the experience modeler to overcome any language deficiencies. Included are some nice drawings of the instrument panel and side panels which will have to be scratch built. Since the canopy is so large, it will be necessary for even the most adamant advocate of "if it can't be seen from five feet, I don't built it" to add considerable amounts of interior detail. To assist in this labor, the cut-a-way drawing of the Orlik that appeared in AIR INTERNATIONAL October 1985 will be most useful. Surprisingly, considering the high quality of the rest of the instructions, the drawings suggest bent wire be used for the landing gear struts. Reference to the AIR ENTHUSIAST's drawings will again be necessary to create realistic looking landing gear.

The instruction sheet gives side and top view drawings for 3 aircraft: 'SP-PCA' the flying prototype in overall natural metal; 'SP-PCA' the example exhibited at Le Bourget last year in an overall attractive dark-blue color scheme; and an unmarked version with the upper surfaces in a three-color camouflage scheme. A set of 1/72-scale drawings would be very useful, but they are not provided.

The decal sheet, which is well printed and very complete, includes markings for all versions depicted on the instruction sheet. The small items such as the PZL logo and all small print are well reproduced and legible, including the red "UWAGA SMIGEO" warnings for the propeller.

The wingspan given in the AIR INTERNATIONAL article result in a scale wingspan of 11.1 cm. The kit scale out perfectly and with a wingspan of 4 3/8 inches it should be a petite beauty. Several of these kits are available from the SAFCH Sales Service; if they sell well, I'll try to get more from Poland. Given some encouragement, we might expect some exciting future releases from Zabawkarstwo.

## Decals for the PZL P-11c

The continuing increase in the quality of modeling products from Poland has brought great cheer to the hearts of modelers interested in Polish aircraft. While Polish books have long been known for their excellent quality, it is only recently that Polish kits have achieved this same world-class quality. For several years now, their injection-molded kits, such as the PZL P-37 Los, the RWD-5bis, and the Il-2m3 have been as good as any modeler could wish. Their recent vacuform kits, such as the P-51B reviewed elsewhere in this issue, are now as good as or better than anything produced anywhere in the world. Now, I am happy to report that Poland is now producing decals sheets that need no apologies.

The new decal sheet from KALKOMANIA-DECALS provides all the markings necessary to finish four 1/72-scale models of the PZL P-11c using either the Revell or Heller kits. The 10 cm by 15 cm sheet provides national insignia,

squadron insignia, factory emblems, code numbers (both for fuselage and under wing), serial numbers, and all necessary bands and stripes. Aircraft featured are (1) Skalski's aircraft '8.66', code T-66', of 142 'Wild Duck' Squadron; (2) aircraft '8.132', code 'N 72' of 114 'Swallow' Squadron; (3) aircraft code '6' of 161 Squadron with 'KOP' on tail and lightning flashes on wings; and (4) an uncoded aircraft of the Deblin Training Center with a white folded-paper horse insignia.

Sufficient national insignia, factory emblems, and 'P-11c' stenciling (in the correct red) are provided for all four aircraft. Only one set of serial numbers is given for each aircraft and I suppose this means the serial numbers were carried only on the port side of the fuselage. This is news to me and I hope that one of our Polish readers can comment on this.

The underwing chessboards are correct for fighters in that they consist only of the red color with the white areas clear so that the undersurface blue will show through.

The quality of the decal sheet is excellent, the printing is so sharp that even the PZL emblem is legible, and the register of the colors is perfect. Including the decals from the Revell and Heller kits, seven different P-11c's can now be built without any need for hand painting. I hope we can look forward to a decal sheet for the PZL P-23 Karas.

### MiG-15 Decals

Another nice sheet of decals have arrived from Czechoslovakia. Produced under the name "Modela", this sheet measures 15 cm by 21 cm and contains markings for 7 different MiG-15's; 2 Soviet, a Bulgarian, & a Chinese single-seater, and an East German, an Iraqi, & a Finnish two-seater. All aircraft are illustrated in color on the instruction sheet.

The printing of the decals is very sharp and there is no problem with register since all colors, except the black & white, are printed separately and the modeler gets to do his own registering. For example, the Bulgarian national insignia comes in 3 parts (yellow, red/white, & green), and even this may not be enough. If you assemble the parts the finished product wont look like the color illustration. (I wish one of our members would do a definitive article on the current Bulgarian national insignia. None of the sources I have agree. MILITAIR 1982 shows a yellow outlined red star with white, red, green, white (from center out) roundel. AIR FORCES OF THE WORLD (1979) has the same roundel but the star is bordered by a white with a thin red line (a la Soviet star). The instruction sheet with these decals shows the red outlined star, but the roundel is red, white, green (from center out). I could quote other references, but you get the idea.) Other problems with this sheet are the absence of codes for the Bulgarian machine, incorrect colors for the codes for the Chinese aircraft, an over-sized fin flash for the Iraqi aircraft, and blotchy green on the Iraqi insignia (probably would look great on a weathered aircraft).

All in all, this sheet of decals is a "mixed bag". It doesn't provide much that isn't available elsewhere, but it does provide it all in one place. So, if you're building MiG's from the SAFO MIG MANIA series (and who isn't) and you already have a correspondent in

Czechoslovakia (and who shouldn't), you will want to pick up one of these sheets. For SAFO readers, they certainly beat another sheet on USN aircraft from Microscale. This is not meant to be a knock at Microscale, they make great decals and they have given us some great small-air-force subjects, but a slight fascination with the USN is sometimes evident in their releases.

### Royal Canadian Navy Decals

IPMS CANADA's second set of decals consists of two sheets, each measuring 14 cm by 23 cm, for Royal Canadian Navy aircraft in both 1/72 and 1/48 scale. One sheet contains RCN roundels (some with yellow rings) with separate maple leaf centers and fin flashes and ROYAL CANADIAN NAVY inscriptions in white. The second sheet features black codes and serials as well as additional ROYAL CANADIAN NAVY and NAVY inscriptions. The sheets are packaged in plastic with a comprehensive instruction sheet and are shipped protected by thick cardboard in a heavy padded envelope.

The 6-page instruction sheet starts with a history of RCN markings, colours, & roundels. It then includes side-view drawings of 13 RCN aircraft (Spitfire 15 1948, Firefly 1 1948, SeaFury 1949, Firefly 5 1949, Avenger AS3 1951, Avenger AS3 1953, SeaFury 1953, C45 1955, T33 1955, Harvard 1957, Tracker 1957, HO4S 1953, & Banshee 1956) and a "Marking Chart" denoting the size, location, & style of all markings, examples of codes & serials, and colours for all 13 aircraft illustrated. Finally, copies of each decal sheet are marked identifying each size roundel and marking. All markings are provided except for several examples that require RN-style codes (with rounded corners) rather than the RCN-style with clipped corners.

This set is available to IPMS Canada members for \$6.00 and to nonmembers for \$8.00. Add \$1.50 for postage to Canada and US and 2.00 elsewhere. Send order to IPMS Canada, Box 626, Station B, Ottawa, Ontario, K1P 5P7 CANADA. With the Canadian dollar going for about \$0.73 US, the \$9.50 total cost to nonmembers works out to about \$7.00 US, not bad for 2 sheets. At about \$5.50 US for members of IPMS-Canada, it's a great bargain.

### A Good Source for UK Magazines

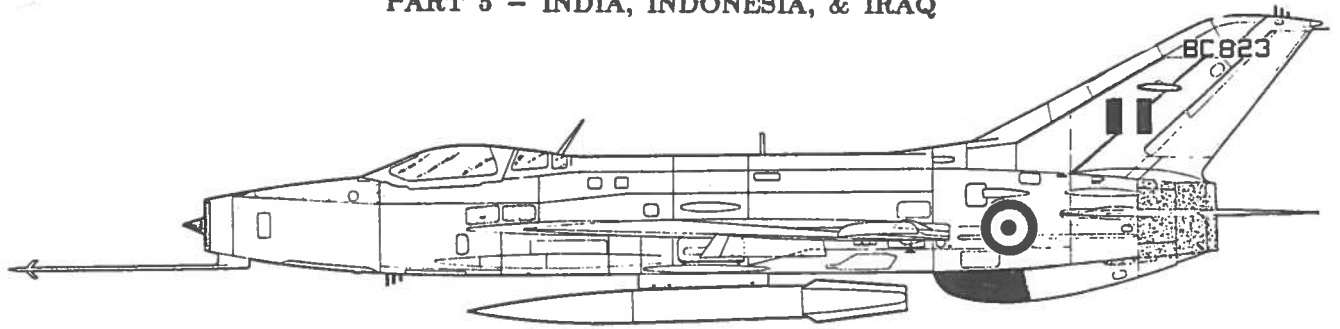
WISE OWL WORLDWIDE PUBLICATIONS (4314 West 238 St., Torrance, CA 90505) provides the North American enthusiast an easy way to subscribe to many European magazines. Some items from their latest list are: PLASTIC KIT CONSTRUCTOR (\$18.00), MODEL AID INTERNATIONAL (\$45.35), and WIND-SOCK (\$19.00). Back issues are available for all of these magazines and for AIRFIX, PAM NEWS, and PROPLINER; write for list of available issues and their price.

Also available from WISE OWL are the HELLAM-VAC vacuform kits: Westland Welkin (\$13.75) and Bristol Brigard (\$15.60).

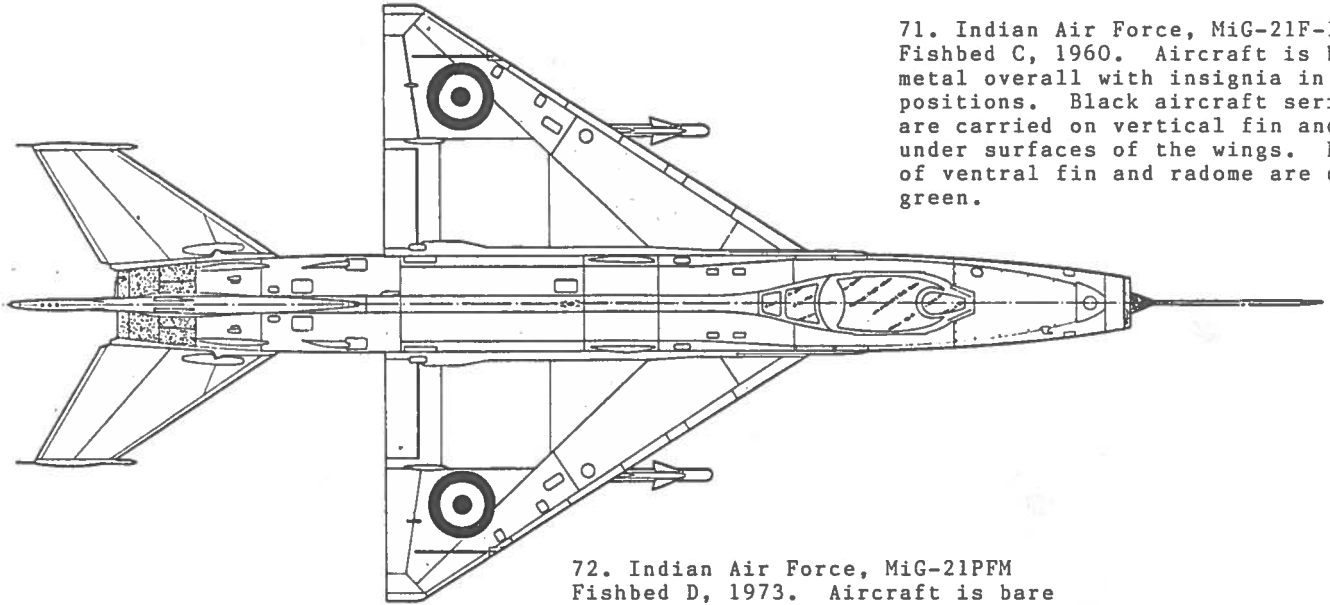
WISE OWL is run by a long-time friend of the SAFCH, Joe Daileda (SAFCH #28), so if your thinking of subscribing to any of the above magazines, please write to Joe at the above address to get his complete list.

# MIG MANIA

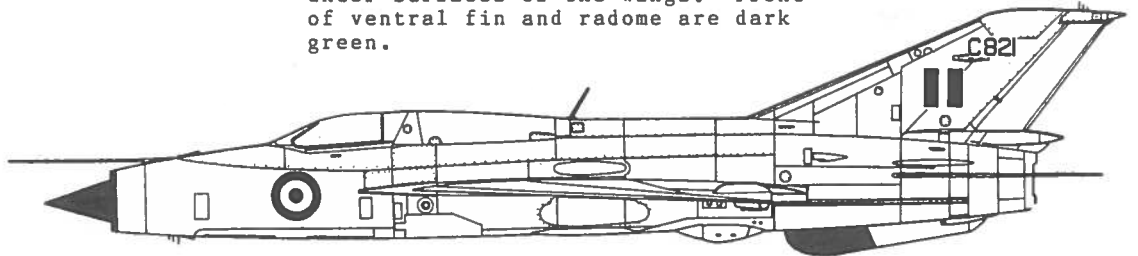
## PART 5 - INDIA, INDONESIA, & IRAQ



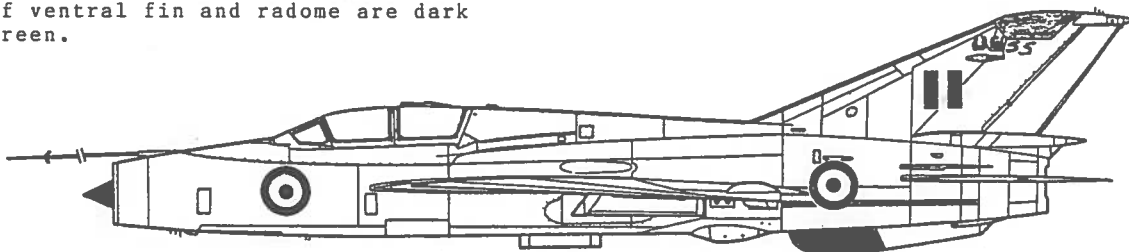
71. Indian Air Force, MiG-21F-13 Fishbed C, 1960. Aircraft is bare metal overall with insignia in six positions. Black aircraft serials are carried on vertical fin and on under surfaces of the wings. Front of ventral fin and radome are dark green.



72. Indian Air Force, MiG-21PFM Fishbed D, 1973. Aircraft is bare metal overall with insignia in six positions. Black aircraft serials are carried on vertical fin and on under surfaces of the wings. Front of ventral fin and radome are dark green.

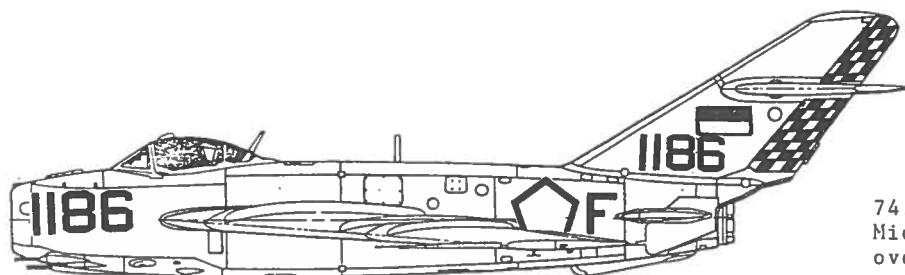
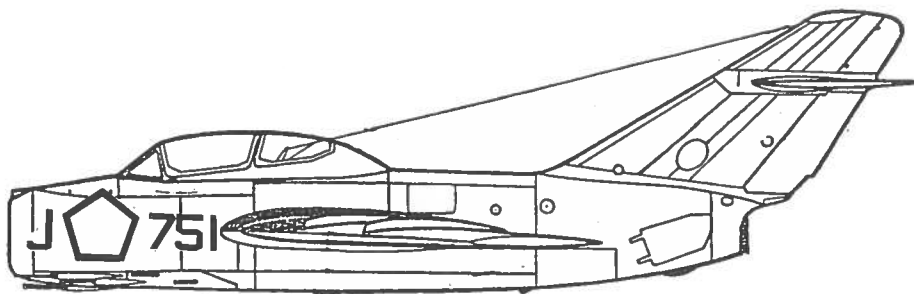


73. Indian Air Force, MiG-21UTI Mongol, 1973. Aircraft is bare metal overall with insignia in six positions. Black aircraft serials are carried on vertical fin and on under surfaces of the wings. Front of ventral fin and radome are dark green.

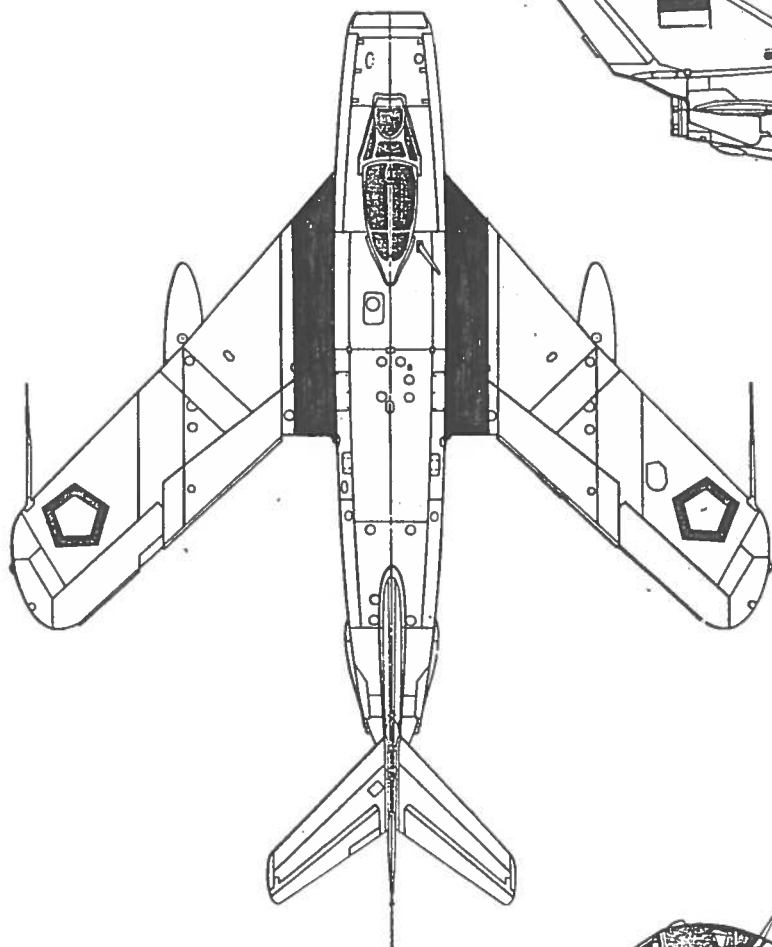
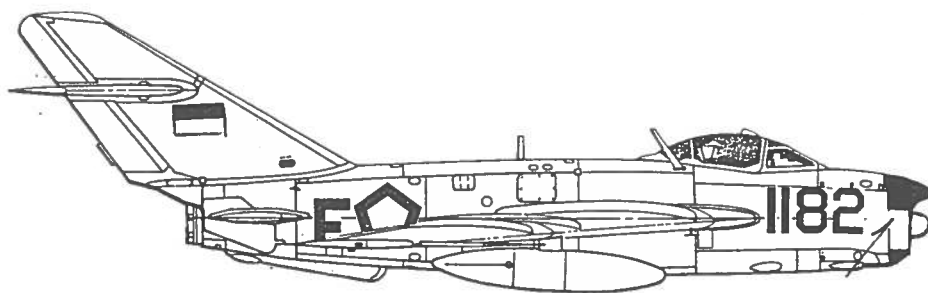




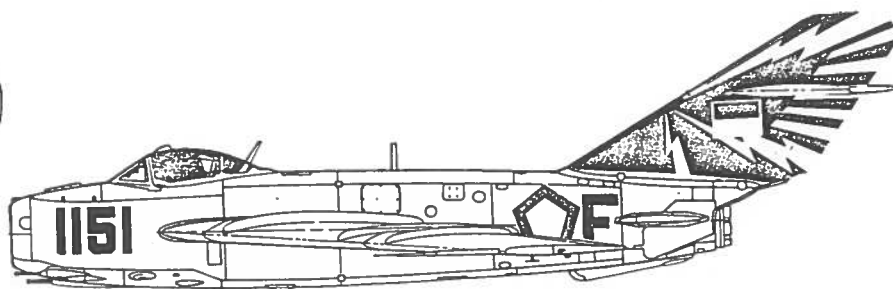
75. Indonesian Air Force, MiG-17PF Fresco D, 1965. Aircraft is bare metal overall with insignia in six positions. Numbers are black. Rudder is black and white checks.



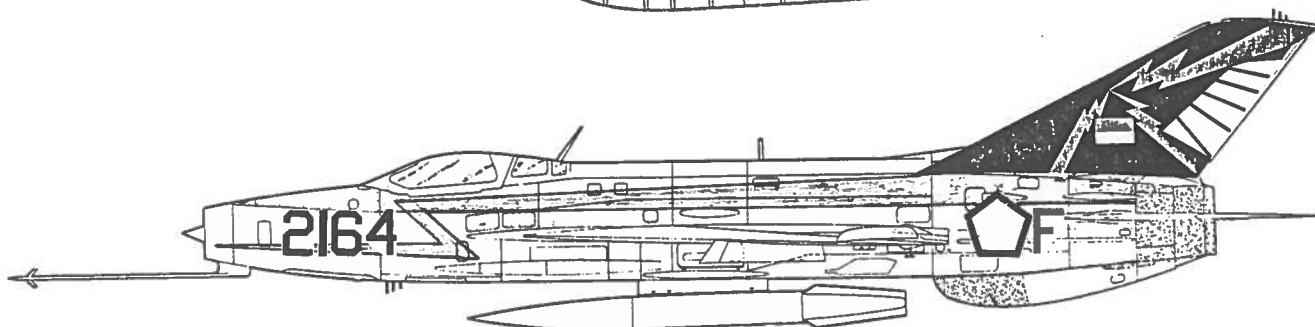
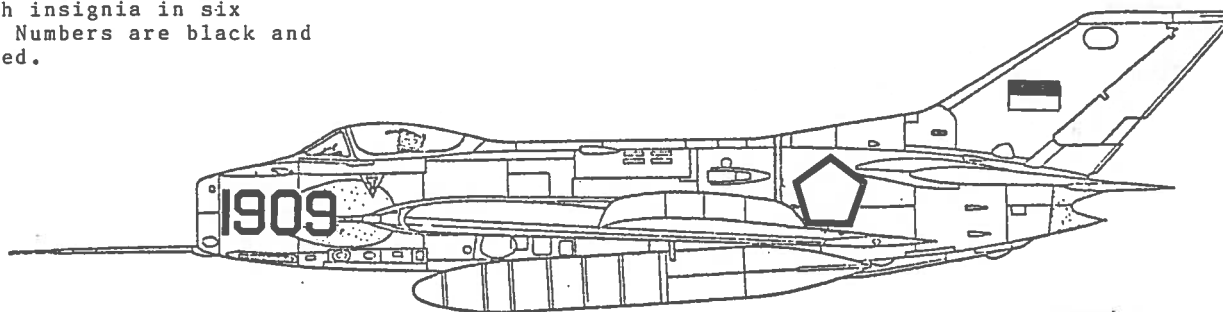
74. Indonesian Air Force, MiG-15UTI Midget, 1964. Aircraft is bare metal overall with insignia in six positions. Numbers and wing walks are black. Rudder is red.



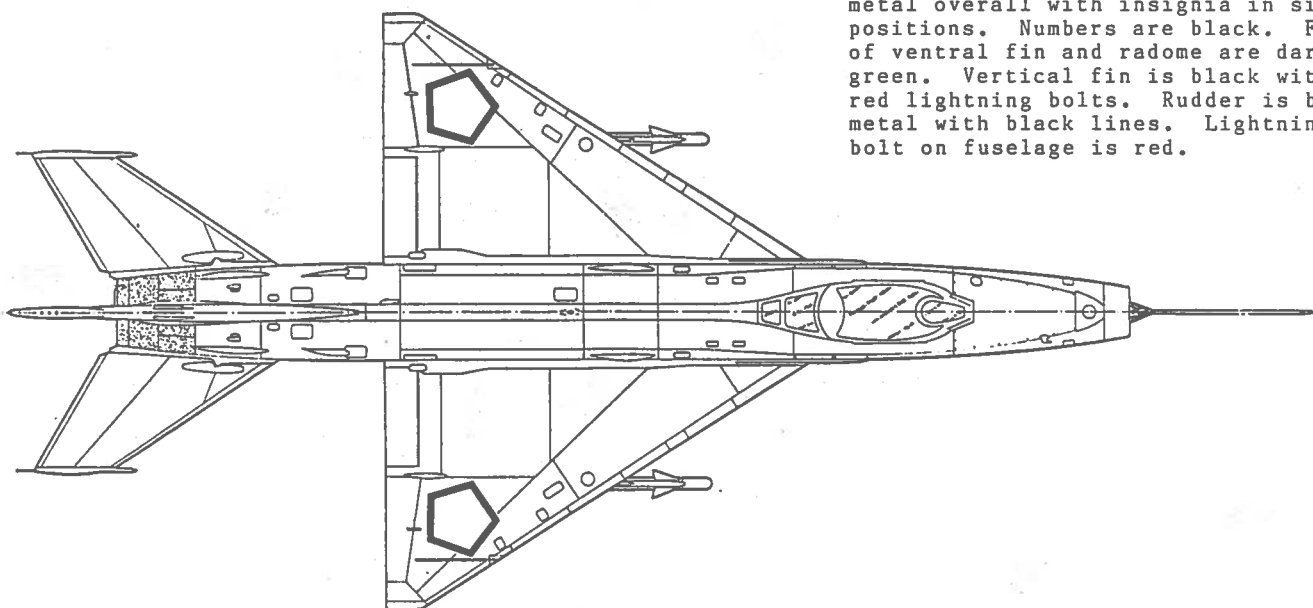
76. Indonesian Air Force, MiG-17F Fresco C and MiG-17PF Fresco D, 1965. Both aircraft are bare metal overall with insignia in six positions and black numbers and wing walks. Fresco C has a red vertical fin with bare metal lightning bolts.



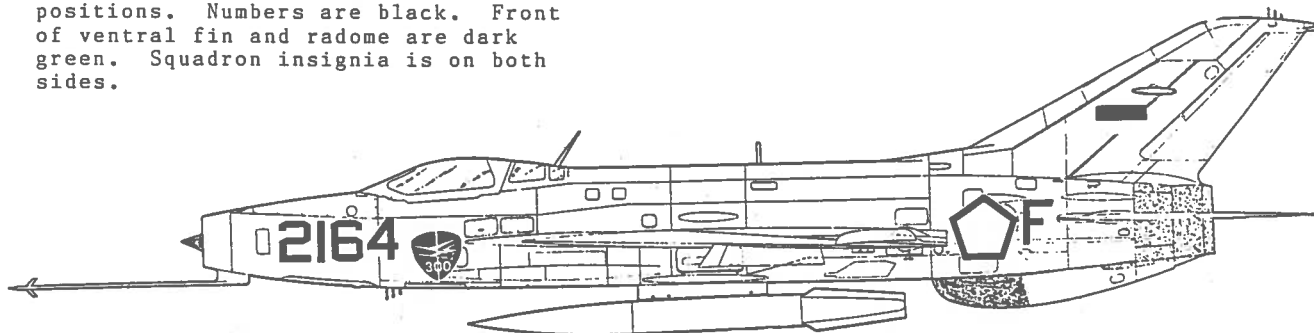
77. Indonesian Air Force, MiG-19 Farmer, 1964. Aircraft is bare metal overall with insignia in six positions. Numbers are black and rudder is red.



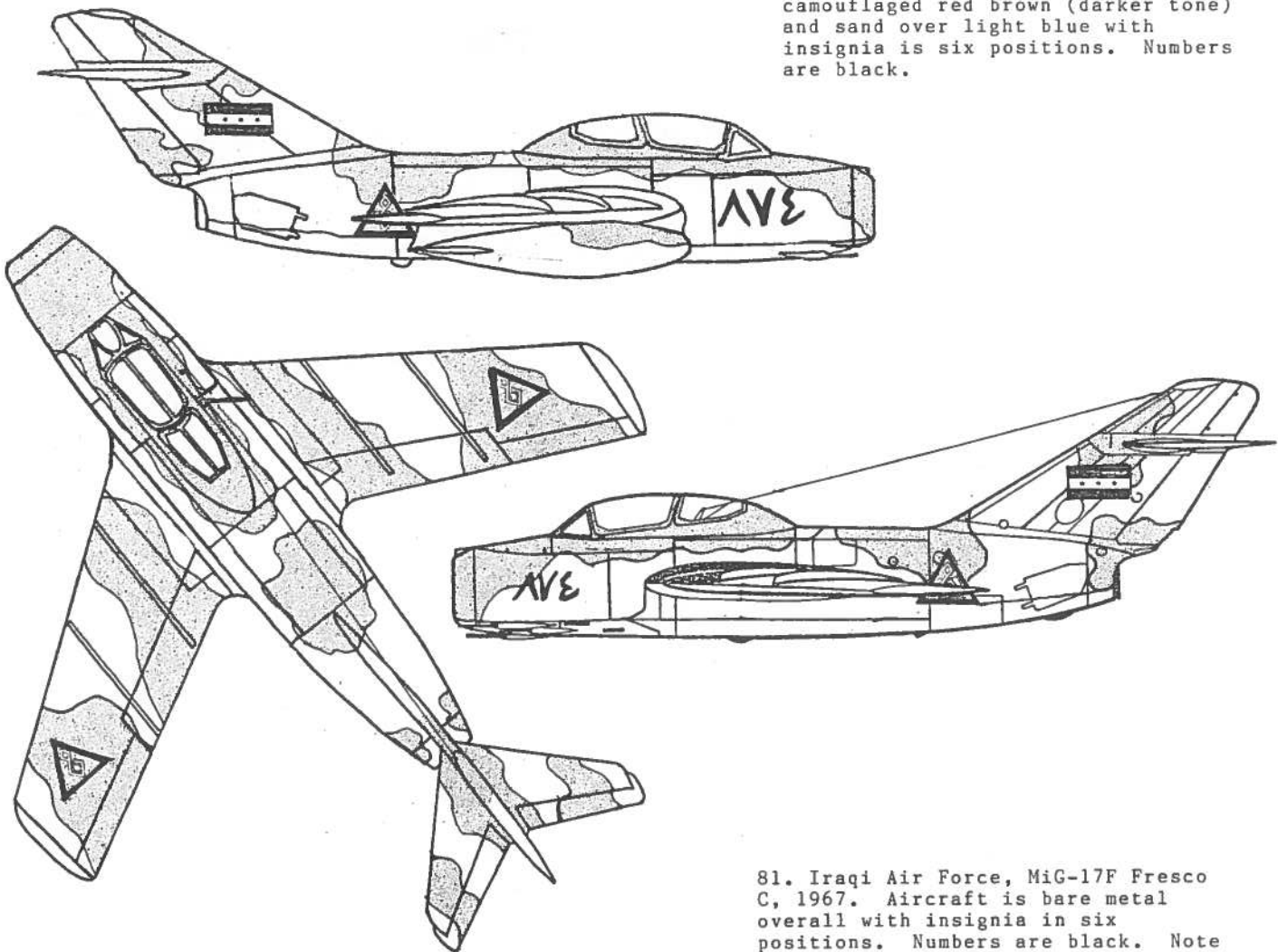
78. Indonesian Air Force, MiG-21F-13 Fishbed C/E, 1965. Aircraft is bare metal overall with insignia in six positions. Numbers are black. Front of ventral fin and radome are dark green. Vertical fin is black with red lightning bolts. Rudder is bare metal with black lines. Lightning bolt on fuselage is red.



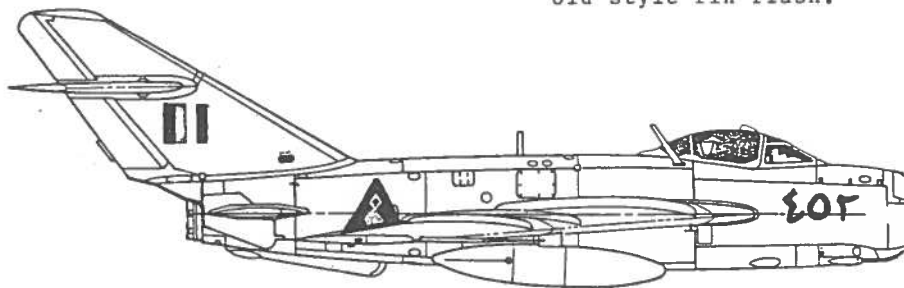
79. Indonesian Air Force, MiG-21F-13 Fishbed C/E, 1965. Aircraft is bare metal overall with insignia in six positions. Numbers are black. Front of ventral fin and radome are dark green. Squadron insignia is on both sides.



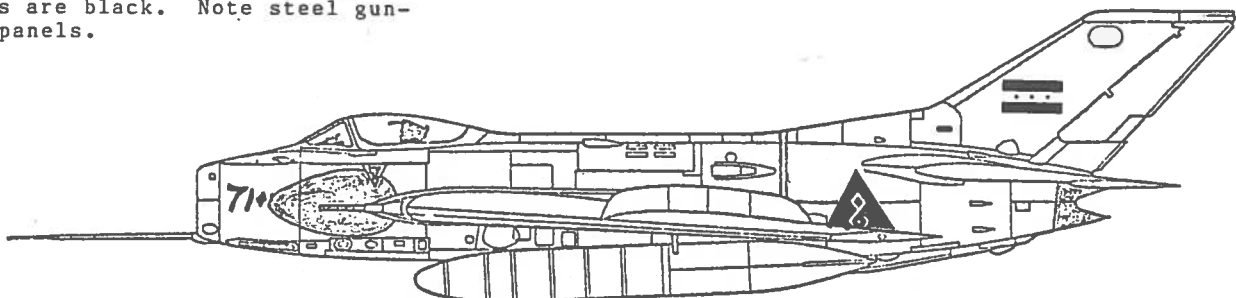
80. Iraqi Air Force, MiG-15UTI Midget, 1978. Aircraft is camouflaged red brown (darker tone) and sand over light blue with insignia in six positions. Numbers are black.



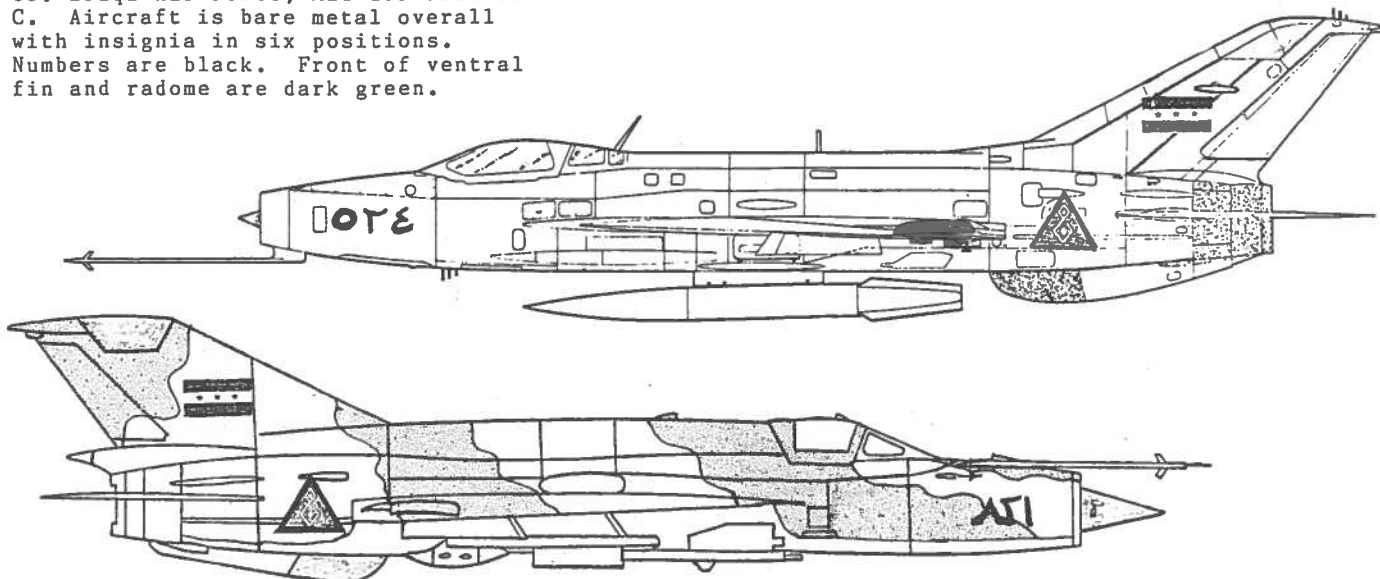
81. Iraqi Air Force, MiG-17F Fresco C, 1967. Aircraft is bare metal overall with insignia in six positions. Numbers are black. Note old style fin flash.



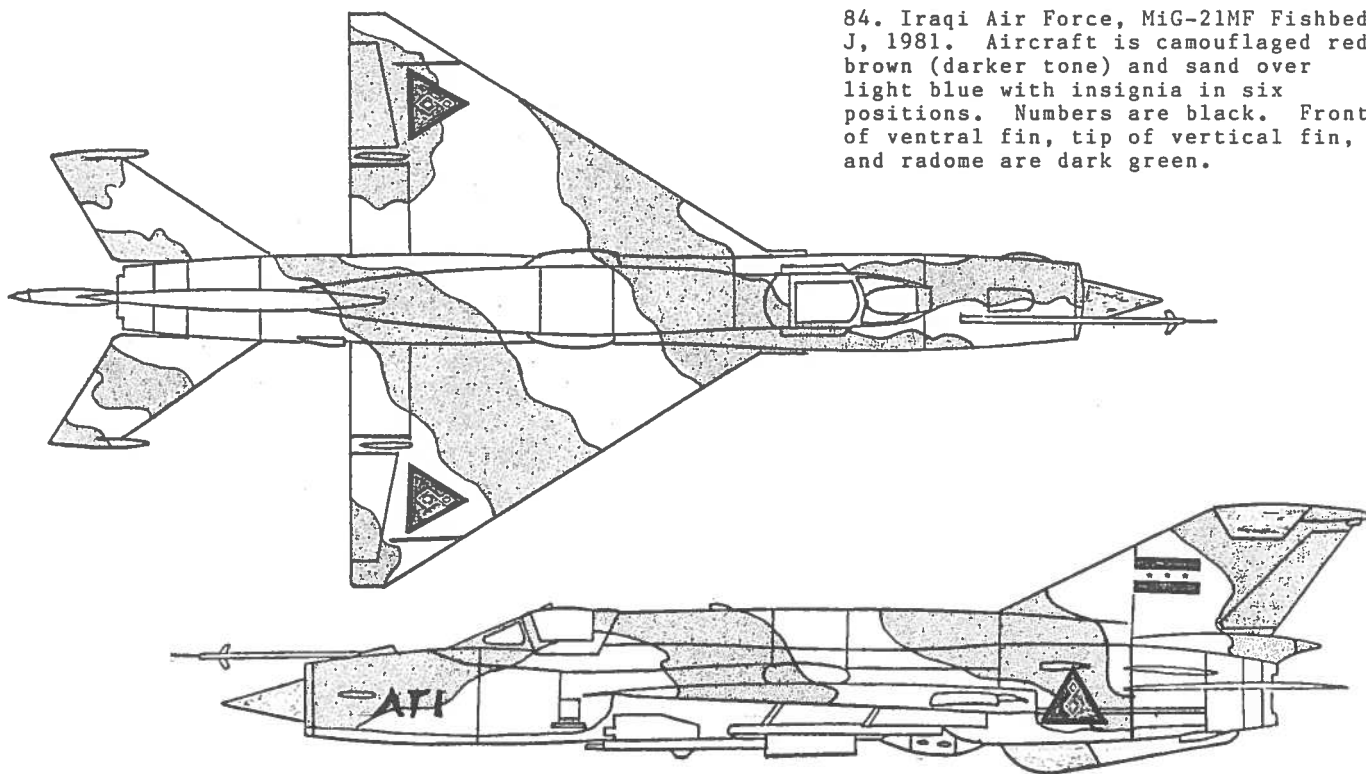
82. Iraqi Air Force, MiG-19 Farmer, 1973. Aircraft is bare metal overall with insignia in six positions. Numbers are black. Note steel gun-blast panels.



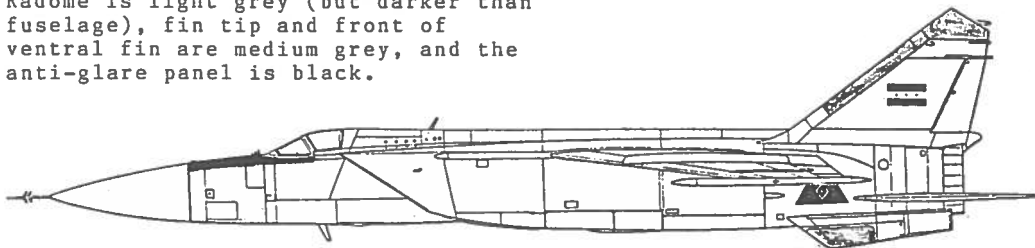
83. Iraqi Air Force, MiG-21F Fishbed  
C. Aircraft is bare metal overall  
with insignia in six positions.  
Numbers are black. Front of ventral  
fin and radome are dark green.



84. Iraqi Air Force, MiG-21MF Fishbed  
J, 1981. Aircraft is camouflaged red  
brown (darker tone) and sand over  
light blue with insignia in six  
positions. Numbers are black. Front  
of ventral fin, tip of vertical fin,  
and radome are dark green.



85. Iraqi Air Force, MiG-25 Foxbat A,  
1982. Aircraft is light grey overall  
with insignia in six positions.  
Radome is light grey (but darker than  
fuselage), fin tip and front of  
ventral fin are medium grey, and the  
anti-glare panel is black.



Nicholas Waters (SAFCH #2), RD 4,  
Box 68, Claremore, OK 74017

## New Kits of Spanish Civil War Aircraft

"I've received the following from Unique Models, 22 Brandies Rd., South Tom's River, NJ 08757:

"(1) 1/48 epoxy I-15 including instrument panel and control stick but no windscreen. I-153 available and I-152 supposedly in progress - \$23 each.

"(2) 1/72 Latecoere 28 epoxy with floats - nice, but windows not drilled out. \$25.

"(3) 1/72 Junkers F-13 epoxy with cockpit and cabin detail. Window holes but clear plastic must be added. Good corrugations. \$23.

"Airmodel AM-026 vacuform Heinkel He 45 'Pavo' with 22 vacuformed parts including windscheens and 19 epoxy parts for propeller, landing gear, struts, etc. Epoxy from Czechoslovakia due soon in 1/72.

"Pegasus apparently has a 1/48 Monocoupe 90A (I have not seen the kit) for about \$3.25. Several were used in the Spanish Civil War - see Miranda/Mercado AVIACION MUNDIAL...Vol. 1." Tom Sarbaugh (SAFCH #497), 21 Live Oak Rd., Berkeley, CA 94705

## Venezuelan Vibrators and Colombian Wilds

"As usual, I had no more than dropped my letter to you than I received several more odds-and-ends.

"First, as an addendum to the Vultee BT-13/15 piece (SAFO #39), I've recently learned that the Vultee Model 54A demonstrator was demonstrated to the Venezuelan aviation folks on 9 August 1940, at which time it was carrying the US civil registration NX21754. The fate of this aircraft would be interesting to learn.

"Secondly, I have additional information on the Colombian Wild aircraft acquired from Switzerland (SAFO #37). The Wild trainers were definitely as follows:

Colombian Serial	In Service (as of 1929)	Number of Flights	Total Hours to 1929
11	1925-1929	1463	171.57
12	1927	74	8.48
13	1927-19282	2335	296.16
14	1927-19283	2405	315.29

- 1 S/n 12 crashed and was w/o 19 February 1927.
- 2 S/n 13 suffered damage on 4 June 1928 and as of 1929 was still undergoing repair and awaiting parts.
- 3 S/n 14 suffered damage on 5 July 1928 but was apparently repaired.

"On the later Wild X aircraft, it is of interest that these aircraft were described in official Colombian delivery documents as 'Aviones de Guerra, tipo de Observacion y Combate Wild'. The serials carried on these aircraft from the outset were as follows:

Colombian Serial	First Flight/Acceptance Date
102	6 May 1928
101	17 September 1928
103	29 October 1928
104	29 October 1928
105	6 November 1928
106	7 November 1928
107	9 November 1928
108	5 April 1929

"It would appear from this that other serials reported for these aircraft were either later ones or contractions of the above, which I think most likely - something that happens with great regularity in the study of Latin American aviation!"

Daniel P. Hagedorn, (SAFCH # 394), 912 Davie Lee, Copperas Cove, TX 76522

## More on Ecuadorian Military Aircraft

"I just finished enjoying SAFO #40 and wanted to comment briefly on the most welcome contribution of the "Wings over the Equator" feature by Alfredo Jurado. I'm sending Alfredo a copy of this letter in case he can expand on any of these points. I hope that he will continue his excellent work in a country where we most urgently need a specialist of his skill.

"DHC-6 Twin Otter: Other sources give the w/o date for FAE-446/HC-BCG as 20 November 1984. As a point of information, FAE-457/HC-BAX was noted at Opa Locka, Florida, 2 October 1980 after being rebuilt following an accident on 27 July 1979. Alfredo is correct in saying that the FAE has acquired three more Twin Otters; they are c/n 832-834, becoming FAE-832 to 834. FAE-453/HC-BAV had a color scheme identical to that shown for FAE-446, except that on the fin the s/n was in 10 inch block letters/numerals with the civil registration somewhat smaller and centered under the s/n, and it carried the TAME "unit insignia" (for lack of a better term) on the cheatline aft of the port cockpit door. Not shown on Alfredo's drawing are the radio masts carried on FAE Twin Otters. These consisted of two pairs (painted black) of conventional masts on the cabin roof, the foremost pair about a foot behind the prop line, with wire running parallel back to the second pair that were above the rear-most cabin/cargo door. Behind these were two side-by-side blade antennae (painted white). Also, the rudder stripes on the uppermost (yellow) portion did not extend forward of the pivot arm as shown on Alfredo's drawing.

"Short Skyvan: The Army Skyvan (T-100) was also ex-N23CK. It became N5592Y in March 1980 and then became 9M-AXN with Malaysia Air Charters.

"PBY Catalina: The facts regarding the FAE acquisition of the Catalinas are not quite correct. One, an OA-10, was acquired under the American Republics Project on 3 June 1948, while the aircraft, illustrated, '602 was apparently purchased independently by the FAE on 17 March 1954. One other aircraft, variously described as an OA-10A or PBY-6A, was also used (see below), but although a second aircraft was in fact MDAP-supported for spares, etc., its origins are uncertain. If the Cats indeed formed an Escuadrilla for maritime surveillance, the existence of such unit is otherwise undocumented, as the two Cats which remained on strength by 1 June 1958 were carried on the strength of the 1st Escuadrón de Transporte based at Mariscal Sucre Air Base (Quito), together with five C-47's and one C-45. Only one Cat was rated "combat ready" at that time. Earlier, on 30 June 1954, a total of two Cats were reported on strength with the FAE, although it is not clear if they were the same two aircraft. Both were assigned to the Escuela de Aviación at Salinas, and both were airworthy. One Cat, c/n 1656 BuA 48294 (a late-production PBY-5A) was sold into the US

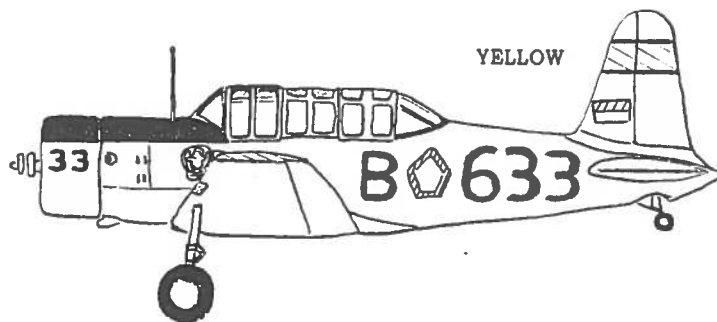
during March 1961, becoming N9521C. It was almost certainly the other FAE Cat. The crashes described by Alfredo thus raise the possibility that yet another FAE Cat existed. A Miami broker reportedly sold a PBY-6A to the FAE circa 1962, so the dates of the accidents could prove key to discovering the identities of these other birds.

"C-47/DC-3: The FAE used/uses rather more than 14 C-47/DC-3 variants since receipt of the first as early as November 1946. At least 23 have been identified, and have included examples acquired through various US aid programs and some acquired commercially by Ecuador. Variants that have been identified include: DC-3-G102/209 (1); DC-3-G202A (2) one of these was once a USAAF C-49J-DO and the other a C-49K-DO; C-47-DL (1); C-47A-DK (1); C-47A-15-DK (1); C-47A-15-DL (1); C-47A-34-DL (1); C-47A-60-DL (1); C-47A-65-DL (1); C-47A-90-DL (3); C-47B-20-DK (2); C-47B-25-DK (1); C-47B-35-DK (1); C-53D-DO (2); as well as at least four unidentified subtypes. Some of the above may have received later, arbitrary USAF type designations (i.e., C-47D) but this has not been convincingly demonstrated. Of the above 19 aircraft, 10 (possibly 11) have been proven as delivered under some form of US aid program.

"T-28 Trojan: The FAE received its first two (of six known) T-28A's on 4 June 1965, followed by at least eight T-28D-5's in 1966-67. The T-28D's (and possibly a few A's) equipped the 2114th Escuadron de Caza, a subordinate unit of the Ala de Combate 21, at Taura Air Base. S/n 50243 was in fact ex-50-243! I enjoyed watching the T-28D's of this unit work-up with similar aircraft of the US 605th Air Commando Squadron at Howard AFB, Canal Zone, in August 1966. I never saw an FAE T-28 with a prop-spinner as shown in his drawing of 0-91647! I think this was a museum addition, probably off a T-6G! I might add that, in spite of what Alfredo says, all of the T-28D's I saw while at Howard in 1966 were painted light grey (like their USAF counterparts). Similarly, four T-28A's bought commercially by the FAE in the US in January 1967 were also painted this same light grey and included 91563 and 91596 (photo evidence is available for all of the above).

"The Latin American Mustang book is doing extremely well, and we have received some very glowing commentary. The F-47 book of similar title is well advanced and I hope to have it ready for Aerofax by next Christmas. The Honduran Air Force history finally made it into Air Enthusiast (#31). Since they were able to use only about 33% of what I submitted, I hope to be able to sell Aerofax on the idea of doing a Datagraph on this subject."

Daniel Hagedorn (SAFCH #394), 912 Davie Lee, Copperas Cove, TX 76522



#### Indonesian Vibrator and Gabonese Skyraider

"I am enclosing two little drawings of aircraft that may be of interest to SAFO readers.

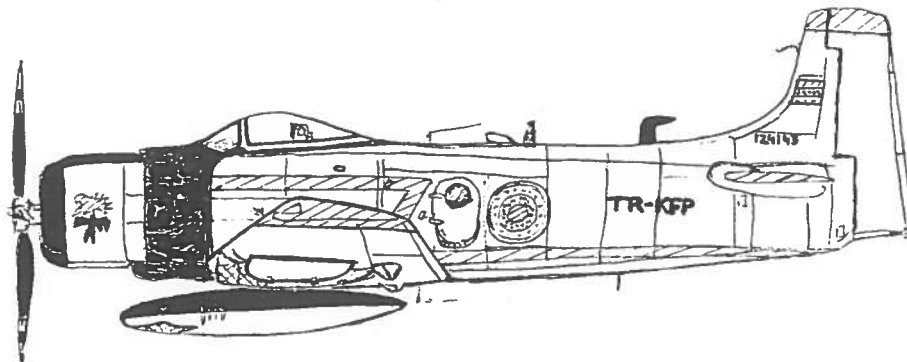
"The BT-13 was photographed in Yogyakarta back in September 1982. It was on exhibition at the entrance of the Training Base. The aircraft was bare metal overall and the wing markings consisted of 'TNI-AU' on the underside of the port wing and on the upperside of the starboard wing with the red & white pentagon in the other positions. The squadron insignia is the same as that now carried on the squadron's Hawks.

"The Skyraider was seen in France in 1984 when two were bought in by collectors. They are now in USN colors, but when they arrived they were in Gabonese colors. Gabon operated ex-french Skyraiders from 1973.

"The aircraft are bare metal overall. The Gabonese roundels (from inside to outside) are green, yellow, and blue outlined by a thin white circle. The fin flash (from top to bottom) is green, yellow, and blue. The squadron insignia on the cowl is the head of a dog. Beneath this appears in dull black are the remains of the squadron insignia carried when the aircraft was with the French Armee de l'Air. The shark's mouth on the underwing tanks is red with white teeth and four white 'gills'. The lower part of the fuselage door is outlined in yellow and the tips of the propeller are gloss orange.

"On the aircraft depicted (TR-KFP s/n 124143) the fuselage flash, the wing and fin tips, and the dog's head are green. The other aircraft (TR-KMP s/n 126956) was similarly marked except the green was replaced by red."

Jean-Paul Garcia (SAFCH #573), 82 Rue de l'Egalite Apt. 47, 93260 Les Lilas, FRANCE



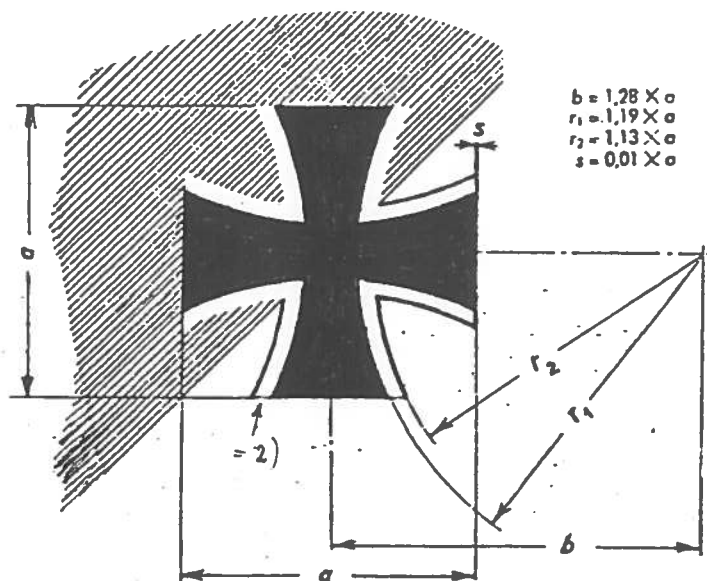
## Bundeswehr Iron Cross

"Enclosed are copies of the official drawings of the national insignia currently in use by the Bundeswehr (Armed Forces) of the Federal Republic of Germany. This insignia is carried in 6 positions, although recently Phantoms and Tornados in the new camouflage scheme carry the wing insignia in four positions USAF-style. The colours are: black RAL 9005 and white RAL 9001.

"Early bare-metal aircraft had the insignia without any black outline on the white border and two forms of Type B exist: (1) white border fully outlined in black. (2) black outline only on the curved sides leaving the straight ends open.

"Several years ago, an insignia with only the white border in black was used for a few months on Phantoms painted in experimental low-visibility schemes."

Fritz Braun (SAFCH #220), Posener Strasse 20, D-8000 Munchen 81, WEST GERMANY



a	b	r <sub>1</sub>	r <sub>2</sub>	s
10	12.8	11.9	11.3	0.1
12	15.4	14.3	13.6	0.1
16	20.5	19	18	0.2
20	25.6	23.8	22.6	0.2
25	32	29.8	28.3	0.3
32	41	38	36.2	0.3
40	51	47.6	45.2	0.4
50	64	59.5	56.5	0.5
63	81	75	71.2	0.6
80	102	95	90.4	0.8

(Editor's note: Fritz is selling, or exchanging for slides, much of his 25-year old kit collection. Except for collector's items, these kits will be less expensive than 1986 prices. Postage will be extra. Fritz is also seeking contact with modelers who can provide Xerox copies of 3-views, decal sheets, and historical notes from older kits. He also seeks box-art painting, mostly from kits by Airfix, Matchbox, Hasegawa, Fujimi, Tamiya, & Aoshima. All cost will be paid. If you are interested in helping Fritz on this project, write to him sending an IRC or mint stamps for an airmail reply.)

## Finland and Ethiopia

"The following are some comments on SAFO #40. Page 103: MiG-15UTI 'MU-5' did not exist; there were only MU-1 to -4. Page 116: I doubt whether the Ethiopian Air Force ever operated the Fokker F.XVIII. However, the service used at least one Fokker F.VIIa with a liquid-cooled engine. It is not clear if any F.VIIb/3m Trimotors were used. The Imperial Ethiopian Air Force had 46 (not 66) SAAB 17."

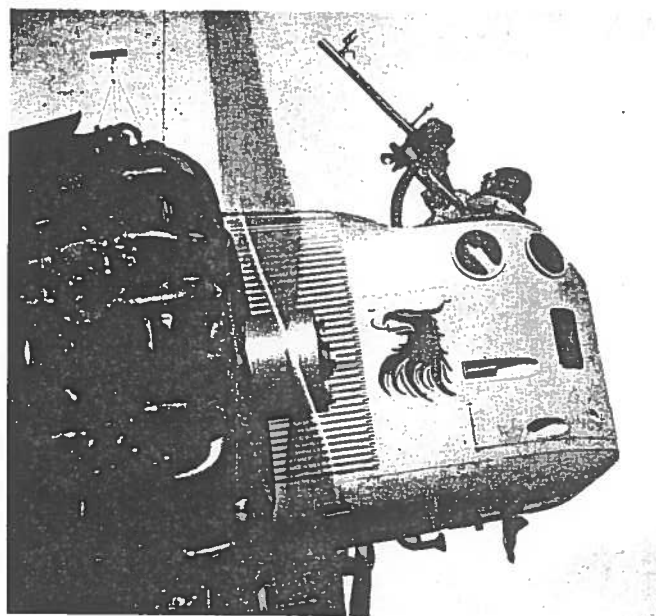
F. Gerdessen (SAFCH #12), Fijnscheerderstraat 12, 4204 ES Gorinchem, NETHERLANDS

## Whose Beast is This?

"I am enclosing a photo of the nose of a Junkers/Flygindustri K-37 copies from from "Fortschritte der Luftfahrt: Jahrbuch 1929/30". Can any reader identify the curious insignia on the nose. What is it? A Dragon of some sorts? What is its significance? This insignia has always mystified me, and I would be most interested in learning the story behind it.

"This aircraft was built in Sweden circa 1927 and was registered 'S-AABL'. Photos show that the insignia was carried only on the starboard side. In February 1931, the aircraft was sold to Japan where it was donated to the Army as 'Akaku (Love of Country) No. 1' in January 1932. It saw service in the Manchurian Incident and served as the prototype for the Mitsubishi Type 93 (Ki-2). This part of the history comes from Airview's '50 Years of Japanese Aviation 1910-1960'."

Zenon Hansen (SAFCH #49), 1626 Sherwin Ave., Chicago, IL 60626



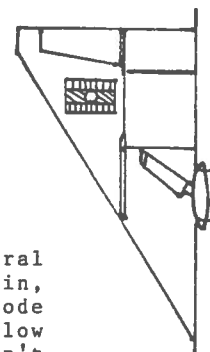
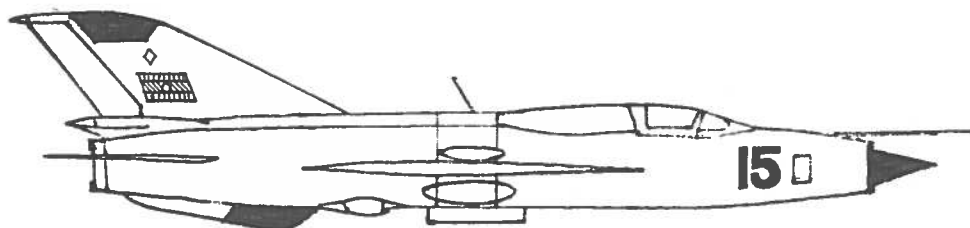
## Back Issues of Scale Aircraft Modelling Wanted

"Since I am stationed in the middle of the Indian Ocean, I have little opportunity to go to book stores and shows so I have difficulties in completing my collection of SCALE AIRCRAFT MODELLING. Perhaps some of our members can help. I need the following: Vol. 1, Nos. 2, 3, 4, 6, 10, 11, 12; Vol. 2, Nos. 1, 3, 5, 6; Vol. 3, No. 12; and Vol. 4, No. 9."

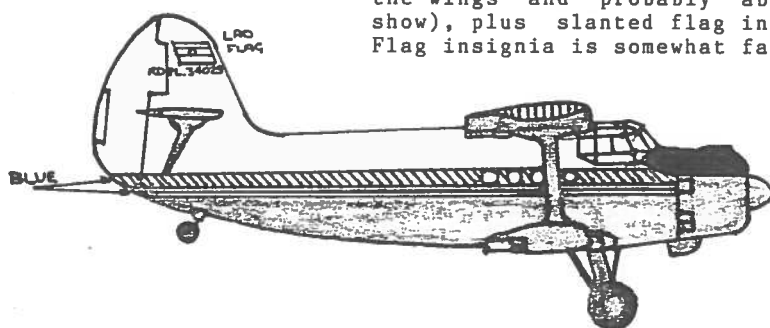
Scott Van Aken (SAFCH #755), NAF Diego Garcia Box 7, FPO San Francisco, CA 96685-1200



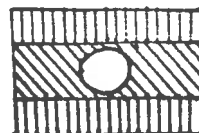
# LAOTIAN SKETCHES



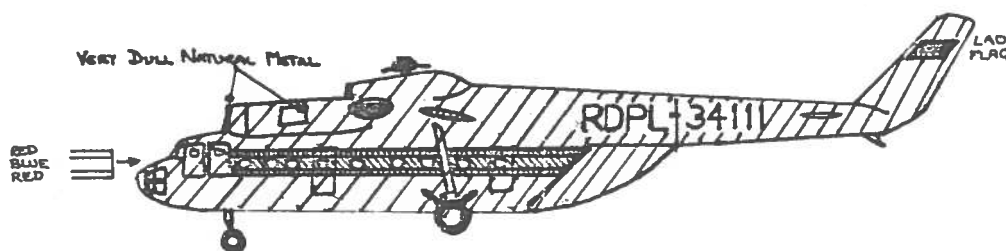
(A) MiG-21PMF, Laotian AF 1985. Natural metal overall, dark green panels on tail fin, ventral fin, nose ring, and shock cone. Code numbers red. Flag insignia is definitely below the wings and probably above (photo didn't show), plus slanted flag insignia on tail fin. Flag insignia is somewhat faded.



(B) An-2, Laos 1985. Probably a 'Civil' machine. Dull natural metal overall. White fuselage top, fin, and rudder. Black anti-glare panel. Red tips (somewhat worn) on upper wings. Fuselage cheat bands are blue (thick band)/white/blue white. Slanted flag insignia plus serial (RDPL 34029 in blue) on tail fin. Rather unkempt appearance overall. Possibly an ex-Aeroflot machine as I've seen several photos of Aeroflot An-2's in identical schemes. No idea of wing markings as the photo was directly side-on.



LAOTIAN FLAG



(C) Mil Mi-6, Laos 1985. Dark green overall, red/blue/red bands around windows, natural metal (very dull) intake rims and fuselage panel, black codes, slanted flag on tail fin. Tips of fuselage winglets red.



RED  
BLUE  
DK. GREEN

All three schemes are from the book LAOS, COUNTRIES OF THE WORLD series, Planeta Publishers, Moscow 1985. It's A4 size coffee-table type production, mainly photos with the usual text (thankfully) limited.

John MacGregor (SAFCH #766), 13 Foggyley Gardens, Dundee DD2 3L6, SCOTLAND

## POLISH NAVY CANT Z 506B

In the late 1930's, the Kierownictwo Marynarki Wojennej (Headquarters of the Polish Navy) finally decided it was time to re-equip the aviation section of the Polish Navy. At this time, the Morski Dywizjon Lotniczy (Naval Aviation Squadron) was operating such obsolete aircraft as the Lublin R VIII and XIII, seaplane designs whose origins went back to 1927 and 1928 respectively. The Polish aviation industry tried, unsuccessfully, to design an indigenous modern seaplane. The Lublin R XX and a naval version of the LWS Zubr proved to have performances inferior to the best foreign equivalents. Finally, in fiscal year 1938-39, the KWM provided money for the purchase of six modern seaplanes from abroad. A study of the foreign aircraft suggested that the Fokker T-VIIIW, a twin-engined float plane, was the best aircraft available. However, the Poles wanted the aircraft's Wright Cyclone engines replaced by Bristol Pegasus engines and they asked Fokker to install a torpedo crane.

In October 1937, the Italian aircraft firm of CRDA CANT approached the Polish government with an offer to sell them their new seaplane, the CANT Z 506B Airone. In November 1937, a Polish naval committee went to Italy and, after examining the aircraft, decided the CANT Z 506B was a better aircraft than the Dutch aircraft. On 9 July 1938, the Poles purchased six CANT Z 506B, with a further 12 seaplanes planned for purchase in fiscal year 1940-41.

By mid-June 1939, the first Polish crew began training on the Z 506B in Italy. During one of these flights, the starboard was damaged, but after replacement by Alfa-Romeo, the CANT was ready to be ferried to Poland. On 27 October 1939 at 1155 hours, the Polish crew took off in the CANT for the flight to Poland. The aircraft was equipped with machine guns, but no ammunition was carried. The flight path lead over Yugoslavia, Hungary, and Slovakia. Over Slovakia, an interception was attempted by two Slovak Avia B-534 fighters, but they were unsuccessful in catching the faster CANT. The ferry flight concluded at 1600 hours on 27 October 1937 when the crew landed at the Morski Dywizjon Lotniczy base in Puck near Gdynia harbor. October 1939 was drawings to a close, and with it would pass last days of peace in Europe.

A few days later, on 1 September 1939 at 0515 hours, Puck was bombed by 27 Heinkel He-111's. During this attack, the commander of the Morski Dywizjon Lotniczy, Lieutenant Commodore Pilot Edward Szystowski, was killed. None of the MDL aircraft were damaged and immediately after the attack, all MDL aircraft were sent to Hel across the bay to await further German attacks. The CANT was not ready for action because no ammunition was available for the machine guns. No Polish factory was producing 0.50 cal ammunition for the Italian Breda Safat machine guns, and the ammunition ordered from Italy was being sent by ship and had not arrived yet.

On the afternoon of 1 September, the Polish naval staff ordered the crew to fly the CANT to Lublin Aircraft factory in central Poland where the CANT could be rearmed with Polish machine guns (wz. 37 cal., 7.92 mm) and

fitted with Swiagatecki bomb gear. In the evening of 2 September 1939, the CANT took off from Puck. On board was a naval liaison officer and a weapon's technician from the Lublin factory. Since the last time the CANT had been refueled was in Italy, fuel was low and when further flight became impossible, the crew alighted on the Vistula river near the town of Kozienice. The CANT was anchored near the shore and camouflaged. The aircraft commander, Captain Pilot Roman Borowiec, communicated with the KMW who told him to obtain more fuel and continue on to Siemien's pond near Parczew.

On 4 September, the navigator, Lieutenant Wilkanowicz, came back from Deblin with 1000 kg of fuel and the CANT was immediately refueled. On the short flight the Siemien's pond, the CANT was escorted by obsolete PWS-10 fighters from the Central Flying School at Deblin. The CANT landed and was anchored near a small island in the middle of the pond where it was camouflaged. Since the Lublin Aircraft factory had been badly damaged by bombs, the rearming of the CANT proceeded very slowly. Then, on 9 September, the CANT was discovered by a German aircraft (probably a Heinkel He-111P) which happened to fly over the pond at a very low altitude. The German plane first machine gunned the CANT and then went away only to return 20 minutes later to drop bombs that destroyed the only Polish CANT Z 506B.

In the winter of 1939-40, the German inspected the wreck, but they left it alone. After the war, in 1952, the pond was cleaned and the wreckage was removed. Some pieces of the Z 506B are now in the possession of people living near Siemien's pond.

**CAMOUFLAGE AND MARKINGS:** The Polish CANT Z 506B was painted silver (FS 17178) overall without any markings such as the lightning motif frequently seen on Italian version of this aircraft. The undersurfaces of the floats were matt black (FS 37038) and the interior is a light grey (probably FS 364927).

The Polish national markings, the red-white chessboard, was carried in four wing positions and on the tail (see drawing). The size of these insignia on both sides of the wing were 1200 mm and on the tail 600 mm.

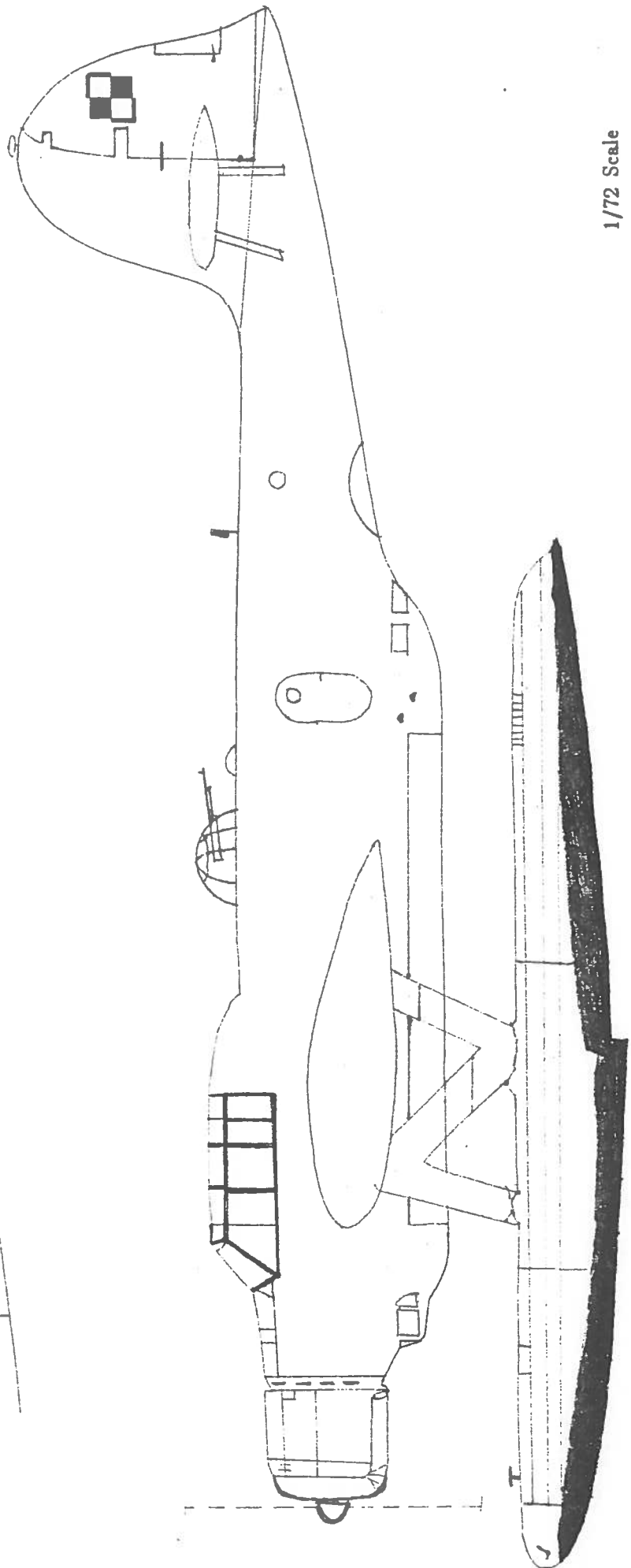
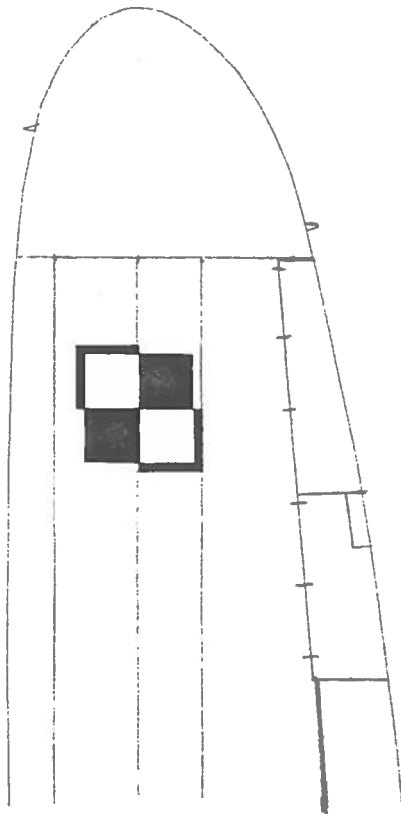
### Modeling the Polish Z 506B

The new Supermodel kit of the CANT Z 506B will make up into an elegant model of the the Polish aircraft. For the Polish version use parts 16, 17, 24, 25, 29, 20, 31, and 92. The decals can be taken from PLASTIK's kit of the PZL P-37A/B Los. The decals from the new LOTNIA sheet for the PZL P-11c (See the SAFCH Sales Service) are the correct size, but since the lower wing insignia for fighters were red without the white, these would have to be applied over a white square which is either painted on or cut from a sheet of solid white decal. The colors of the Polish chessboard are white (FS 27886) and red (probably FS 21136). Their size in 1/72 scale would be 16.6 mm on the wings and 8.3 mm on the tail.

Janusz Ledwoch (SAFCH #780), PO Box 106, 00-961 Warsaw, POLAND

# MORSKI DYWIZJON LOTNICZY

CANT Z 506B



1/72 Scale

# CESSNAS OF THE URUGUAYAN AIR FORCE

## Cessna 170B:

s/n 736; ex CX-ANO (dd 21.6.55, still on register 8.72); ex N2969D.

## Cessna T-41D/R.172F:

s/n	c/n	USAF	dd
601	R172-0392	69-7675	27.11.69
602	0393	7676	"
603	0394	7677	"
604	0395	7678	"
605	0396	7679	"
606	0452	70-2027	1970
607	0494	2456	"

## Cessna 182A:

s/n 742 (confiscated civil aircraft).

## Cessna 182D:

s/n 741 ex 523; c/n 53548; ex N11B.  
s/n 742 ex 524; c/n 53549; ex N11B.  
Both dd to dealer 26.8.61 for Air Force.

## Cessna U-17A-CE:

s/n	c/n	USAF	dd
750	185-0923	65-10852	17.8.65
751	0936	12734	18.9.65
752	0937	12735	"
753	0938	12736	"
754	0939	12737	"
755	1020	66-8033	26.3.66
756	1023	8034	"
757	1026	8035	"

## Chinese Air Force Project

"That long-promised article on the Chinese PLAAF was necessarily shelved for a couple of years while I was in Korea. I have dug out my notes and will try to have the article finished within a few months. The article will consist of a brief text, a table explaining the various designations for PRC aircraft (for example, one line reads: BT-5 / Hongjiao-5 / Il-28U / Mascot), and some drawings which I hope will avoid the same old hackneyed views we've all seen ten times.

"The text and table are essentially completed and need only to be revised to include the new F-8-II (NATO designation?). The drawings will take some time and, since I am no an artist, I may just leave them out as the rest of the information can stand pretty well without them.

"I am still looking for photos of the following aircraft in PLAAF color showing markings: An-2/V-5, Aviakhim U-1, Be-6, BO 105, DeHavilland Mosquito, Il-2, La-9, La-11, Pe-2, Po-2, Republic P-47, Tupelov SB-2, Tu-4, and Yak-9P. Also, the L-29 Delfin, if they have it - nobody seems to know for sure."

Randy Geithman (SAFCH #400), 10480 Aldora Dr., Miamisburg, OH 45342

## Polish Book Wanted

"I am looking for a copy of the book "Samoloty myśliwskie pierwszej wojny światowej" by Tomasz Gowronek. I would be willing to either purchase a copy or trade for other WWI material."

Richard Folk (SAFCH #689), 16 Rustic Trail, Flemington, NJ 08822

## Cessna 310:

s/n ?; c/n 35499; ex CX-ARA (2.57-8.72); ex N5299A; confiscated 9.72 from Tupmsros; w/o 1977.

## Cessna 310L:

s/n 542; later CX-BPA/T-542; ex LV-JHE (as such at Montevideo 5.3.72); c/n 0102; current 1980.

## Cessna A-37B:

s/n 270/277; c/n 43540/43547; USAF 75-00410/00417; dd 11.76; 250 & 251 lost 6.10.83.

Thanks to Daniel Hagedorn and Robert Pickett.

Addenda to article on Uruguayan Beech aircraft in SAFO #35: A tenth Beech AT-11 was dd in 1947; ex USAF 42-37254; serials in FAU service 100/109 (with prefix).

Bram Risseuw (SAFCH #396), P. de Hooghstr. 3, 4532 Terneuzen, The Netherlands

## Le Fannatique

"The December 1986 issue of LE FANATIQUE DE L'AVIATION has some good information for SAFO readers. (1) Color photos of Spanish F-18 Hornet, Portugese SA-330C Puma, Islamic Republic of Mauretania AF Short Skyvan & BN Defender, and Yugoslav Aero 3 being restored by two French airline pilots. (2) A good article on the Koolhoven FK-58, complementing the one published in AIR INTERNATIONAL some years ago.

"A new resin molded 1/72-scale kit in the Replica series, the FK-58 is obtainable only by subscription until March 1987 from: Replica, 3 rue Asile Popincourk, 75011 Paris, FRANCE. Price is 98 Francs (about US \$14) plus 25% for postage to the USA. Also in this series are the SIAI-Marchetti SF-260, Arado 96L, and Jupiter-engined Potez 25."

Daniel Bajno (SAFCH #733), 185 rue Jean de Gouy, 59500 Douai, FRANCE

-abstracts-abstracts-abstracts-abstracts-abstracts-

Continued from page 5

WEAPONS AND WARFARE MONTHLY (218 Beech ST., Bennington, VT 05201; 12 issues \$20.00 US, \$25.00 foreign.)

4/86 (30 pages) "Escadron de Caza No. 34: 1956-1968" one page with 2-view drawing of Venezuelan Venom FB.4.

5/86 (30 pages) "Commonwealth Aircraft Corp. CA-15" one page with scale 5-view drawing.

6/86 (30 pages) "Kittyhawk Kolors" one page with 6 side-view drawings of RNZAF P-40's.

7/86 (30 pages) Nothing of small air force interest.

8/86 (30 pages) Nothing of small air force interest.

9/86 (30 pages) "Arsenal VB-10C1-02" one page with scale 5-view drawing.

10/86 (30 pages) "Yakovlev Yak-18" one page with scale 5-view drawing.

# INDONESIAN CESSNAS

1. Cessna 180B (L-10), L-186, (c/n 31255); Skwadron Udara #4 TNI-AU.

Colour scheme: Natural metal overall with red & white fin flash and pentagons in 4 positions, and black serials. The badge of Skw.U.4 is located under the cockpit, but its colours are unknown.

Reference: B/W photo via Mick Burton.

2. Cessna L-19A (O-1), I-1002; TNI-AD (Army).

Colour scheme: Olive drab overall with red & white fin flash and pentagons with yellow star in 4 positions, and yellow ANGK DARAT and serials.

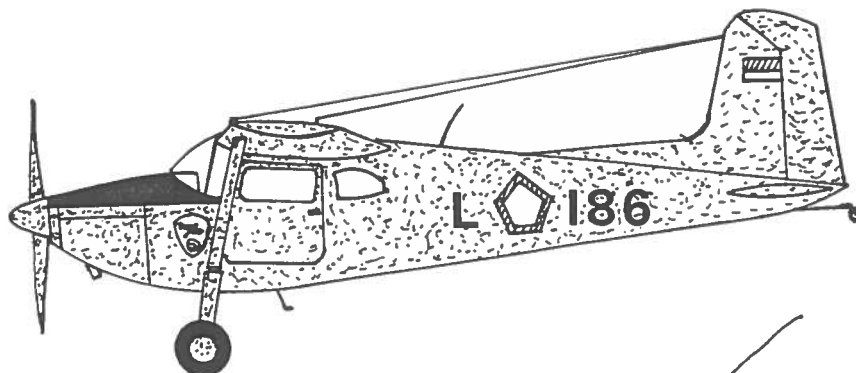
Reference: B/W photo via Mick Burton.

3. Cessna T-41D (172), LM-4191; Wing Pendidikan #1, TNI-AU.

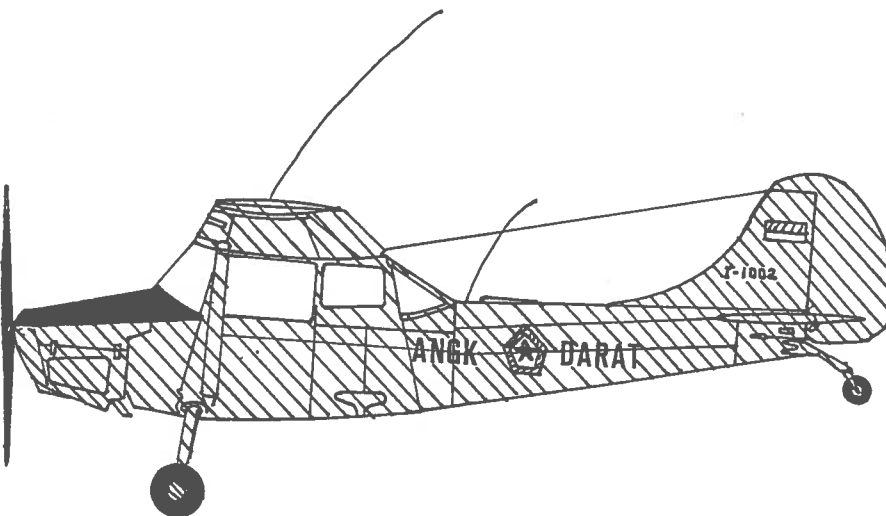
Colour scheme: Light grey overall with yellow fuselage stripe outlined in black, red/white fin flash and pentagons in four positions, black serials and TNI-AU on wings (a la USAF), white blade antenna, and the badge of Wing Pendidikan No. 1 under the cockpit (See SAFO #35) for details of this badge.)

Reference: KOKU FAN, April 1984.

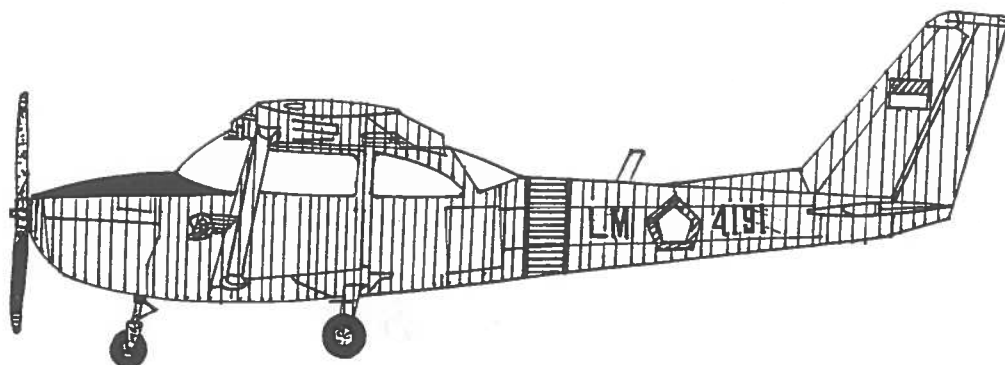
Common to all aircraft: The antiglare panels are matt black. The propeller blades are aluminum on the front side and black on the rear side with yellow tips.



1.



2.

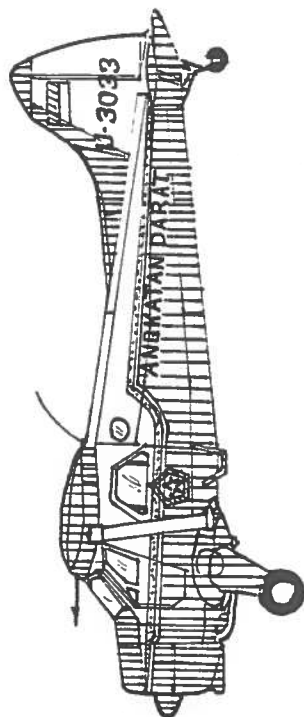


3.

Mick Mirkovic (SAFCH #465), 11/32 Curlewis St., Bondi, NSW 2026, AUSTRALIA

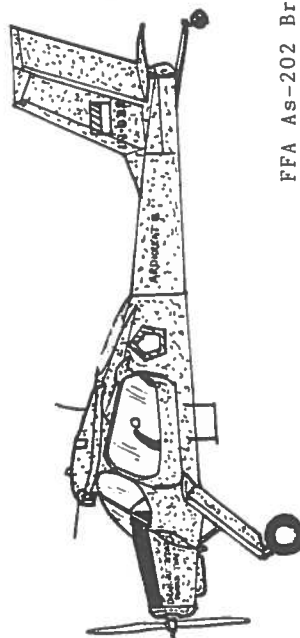
# INDONESIAN MISCELLANY

DHC-3 Otter, T-202 (c/n 300), Skwadron Udara 4, ANGKATAN UDARA REPUBLIK INDONESIA - AURI, (Indonesian Air Force), 1960's. Grey (FS 36357) overall with matt black anti-glare panel and serials. The fronts of the propeller blades are aluminium, the backs are black, the tips are yellow, and the spinner is aluminium. Natural metal exhausts. Red & white pentagons and fin flash. Reference: DHC-3 OTTER, Hayes, Irish Air Letter.

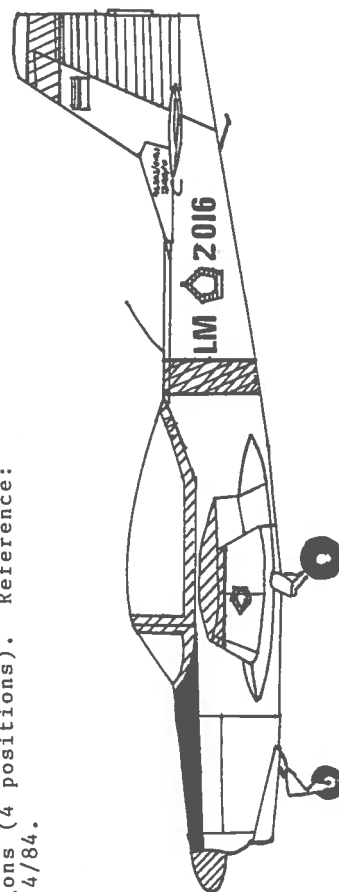


DHC-2 Beaver, U-3033, TENTERA NASIONAL INDONESIA-ANGKATAN DARAT - TNA-AD (Indonesian Army). Gloss olive green overall with white upper fuselage, rear of fin, rudder, wheel hubs, and wing struts. Yellow cheat line, serials, and titles (titles also on upper starboard and lower port wings). Matt black anti-glare panel. Natural metal exhausts. Red & white fin flash and pentagon with gold star (in 4 positions). Reference: Photo via Mick Burton.

Nurtanio/PZL 104 Wilga 35 Gelatik, IN-032, Direktorat Jenderal Pendidikan Tinggi, TNI-AU (Indonesian Air Force), 1984. Matt yellow overall with matt black anti-glare panel, serials, TNI-AU (on upper starboard and lower port wing), "AROKREAT B" on fuselage, and "DIREKTORAT JENDERAL PENDIDIKAN TINGGI" on engine cowl. Red & white fin flash and pentagons (4 positions). Reference: KOKU FAN, 4/84.

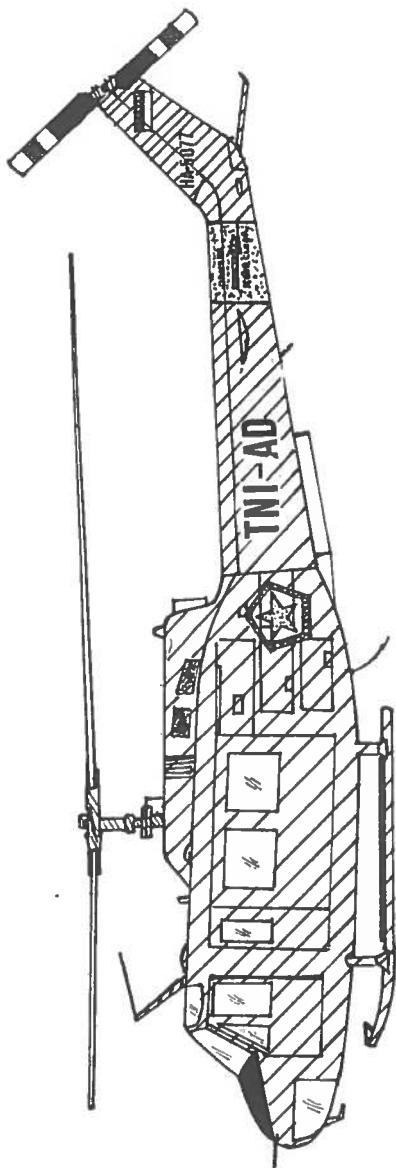


FFA As-202 Bravo, LM-2016, 101 Skwadron, Wing Pendidikan #1, TNI-AU. Overall light grey with yellow spinner, canopy frames, fuselage band, fin stripe, and wing tips (outlined in black). Matt black anti-glare panel and propeller blades. Black serial and "AS202/18A3 BRAVO" on fin fillet. Red & white fin flash and pentagons. Reference: KOKU FAN, 4/84.

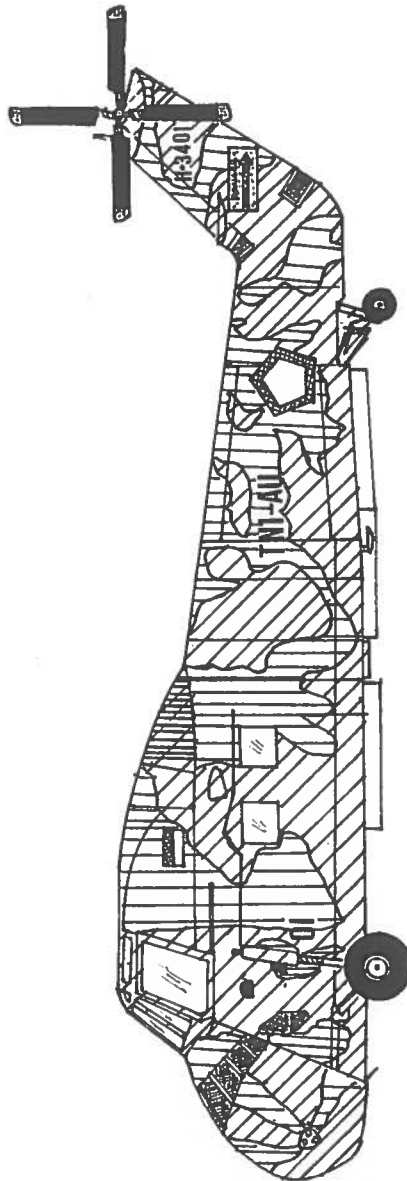


Mike Mirkovic (SAFCH #465), 11/32 Curlew St., Bondi, NSW 2026, AUSTRALIA

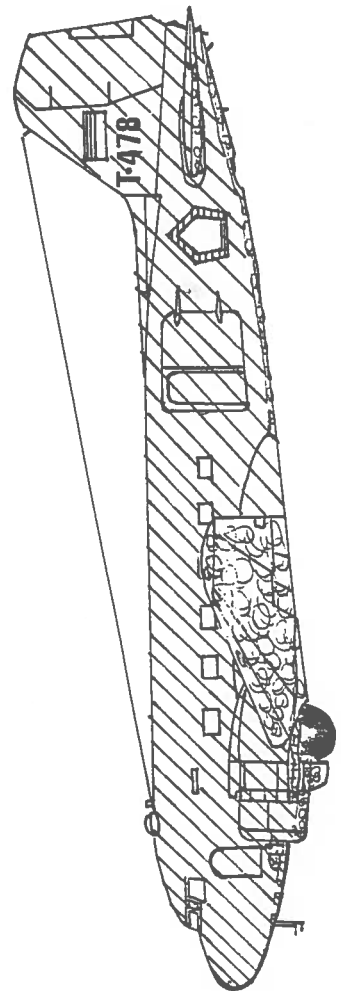
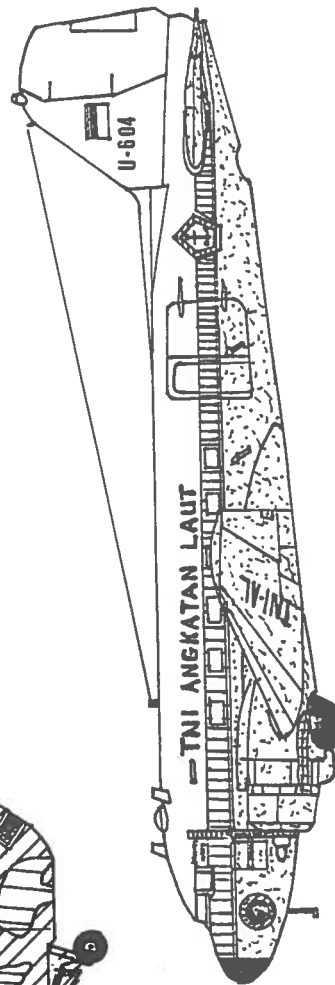
Bell 205A-1, HA-5077, TNI-AD (Indonesian Army). The Indonesian Army has sixteen 205A's. Overall olive drab with matt black anti-glare panel and anti-skid on skids. The tail rotor is black with white/red/white tips. Main rotor is dark green on top, black underneath, with yellow tips. Yellow titles and serials. Red & white pentagons with gold star on fuselage side and under nose. Red & white fin flash. Yellow warning band with red arrow and "DANGER KEEP CLEAR". Reference: ASIA PACIFIC DEFENSE FORUM, Spring 1982.



Sikorsky S-58, H-3401, Skwadron Udara 6, TNI-AU. This is one of four S-58's still in use with the Indonesian Air Force as of 11/85. Serials H-3401/3404. Overall olive drab with light brown camouflages on the upper surfaces. White serials, titles, and "OI". Red & white pentagons on fuselage side and under nose. Red & white flag on engine cowling. Black rotor blades with yellow tips. Yellow warning panel on tail with red arrow and "DANGER KEEP CLEAR". Reference: Photo via Mick Burton.



Douglas C-47, T-478, AURI, 1950's. Upper surfaces dark green. Lower surfaces dark grey. Red & white fin flash and pentagons (in 6 positions). Reference: DC-3, Gradidge, Air Britain, 1985.

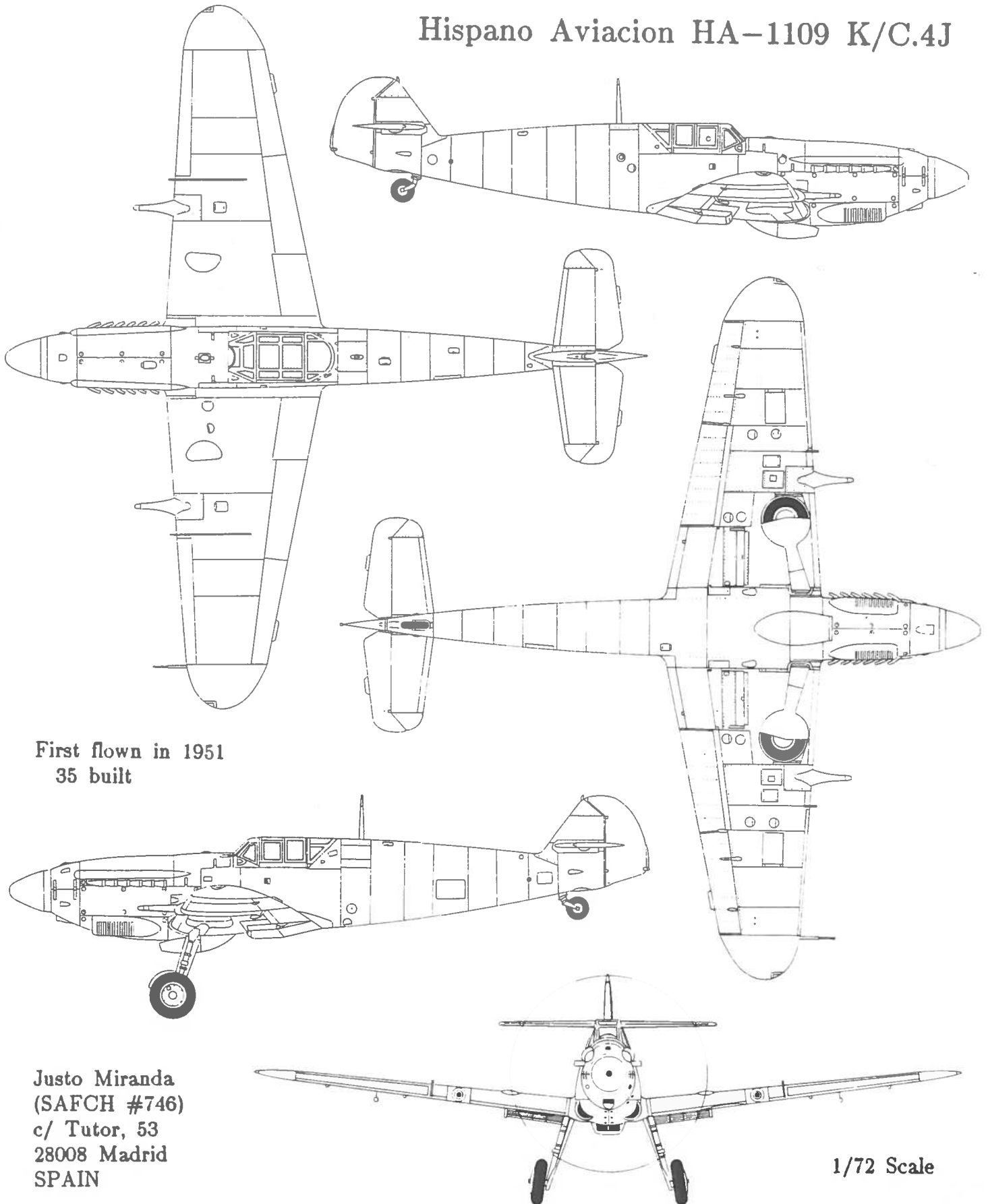


Douglas C-47, U-604, 600 Skwadron, TNI-AL (Indonesian Navy), 1984. Overall natural metal with white fuselage top, fin, and rudder. Dark blue fuselage cheat line. Matt black nose and propeller blades. Black serial, "INDONESIAN NAVY" behind cockpit, titling on fuselage, and "TNI-AL" on upper starboard and lower port wings. Warning markings consist of yellow & black rescue arrows, red stripe with white "PROPELLOR" and white bars with red "DANGER". Red & white fin flash and pentagons with black anchor. Squadron badge on nose is a white horse's head in a dark blue circle outlined in yellow and black with "SKWADRON 600" in black. Reference: MILITAIR '82 and photo via Mick Burton.



# Spanish Air Force

## Hispano Aviacion HA-1109 K/C.4J



First flown in 1951  
35 built

Justo Miranda  
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1/72 Scale